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THE AMERICAN EXPERIMENT[1]

I

BEFORE I begin to deal with the actual problems presented by the American Experiment, let me indicate that in my view the fate of that experiment will have consequences very much wider than appears at first sight, both in the sphere of practice and in the sphere of economic theory. Ever since 1929 public opinion in this and other European countries has been very strongly influenced by at least two, or possibly three proposed principles of action which are in the course of being tested in the United States to-day. The fashionable economists of the moment have for some years been preaching the doctrine of expansion and have been contrasting very favourably their principles to those which are usually attributed to what is called the deflationist school. That is one side of the practical issues which are being tested in America to-day. Is it possible to expand the aggregate volume of purchasing power effectively, in the absence of those particular psychological conditions which made for inflation in, for example, the period immediately after the war? The second fashionable remedy of the moment is to attack depression in the constructional trades, with directly and indirectly favourable results, by large-scale expenditure on public works. Thirdly, and lastly, and perhaps most importantly, there are favoured in this and other countries to-day, certain views as to wage and hours policy which again are being tested in the United States. I do not think it is exaggerating to say that the modern fashionable doctrine, in the labour movement and outside it, is that the proper way to cure a depression is the expansion of working class purchasing power, which can be achieved by the simple expedient of raising wages and at the same time reducing the hours per man which are worked per week. That is the fundamental philosophy of the National Recovery Act. You will see that the United States at the present time is like a vast laboratory in which these fashionable ideas are being put to a very severe test. I admit that it may be

[1]This article is the substance of two lectures delivered in the Victoria University in October, 1933.

argued that there is something peculiar about the psychology of Americans, so that results arrived at in the United States might not be directly applicable to this or other European countries. But, at any rate, some light will be thrown upon the validity of some current monetary and economic theories by what is going on in the United States.

Very early in the history of the American experiment I ventured publicly to be extremely sceptical about the outcome of the experiment : I still am. At the beginning of August I said publicly in the North American Continent that the only chance of success which the experiment possessed was that the American government should be successful in reducing the external value of the American dollar. I am in the position of being able to say, " I told you so," because efforts have been made in this direction. But the American currency policy of devaluation and depreciation is interesting not only because of its very intimate connection with the fate of the industrial and agricultural proposals of the American government. For two reasons it is interesting : in the first place it has been the object of the present American administration ever since it came into office to raise the level of prices ; in the second place, the acuteness of the American depression is primarily due to the fact that the United States has recently lacked what this and various other countries possessed—a stable banking system. The fate of the dollar, the fate of N.I.R.A., and the fate of the American system are all tied up with one another. This evening I am going to deal with N.I.R.A. and what has been happening in the United States in the sphere of finance.

Primarily I want to deal with the question of American experiments in financial re-organisation. We can look at this problem from two angles, and ask, first, what are the various things which the American government is trying to do, and secondly, what are the various agencies which the American government has called into existence that these things may be done. Unfortunately, a description of American effort by interpreting the new organs of government is made difficult by the fact that there is one institution, the Reconstruction Finance Corporation, which cuts across the functions of the various instruments which the American government has set up. In order to make the situation clear, I want to say one word about the position looked at from the standpoint of administrative science. There has been called into existence in the United States an enormous number of new experimental agencies, and others are being called into existence every day. In the last three weeks, no

less than four new institutions intended to carry out experiments have been created in this way. The most significant fact in the history of the last six months has been that the traditional agency of financial reform in the United States has been pushed aside, and that one central organisation has sprung up, the importance of which cannot be exaggerated. In 1913, as a consequence of the financial and economic depression of the year 1907, the last democratic president before President Roosevelt established a system of reserve banks to buttress the National Banking system, and it has been part of the fashionable custom, in this and other countries, in the last ten years, to regard the Federal Reserve system as the last word in central banking machinery.

In the last six months the Federal Reserve system has almost ceased to count. The real agency of the financial policy of the Roosevelt government is not the Federal Reserve system : it is the R.F.C., which is not a creation of the Roosevelt régime ; it was created by the Hoover administration in February, 1932, on the lines of the War Finance Corporation, primarily with the purpose of salvaging a banking system which was visibly falling into decay. From the beginning, it was given powers to loan money on a large scale for the purpose of helping farmers and financing public works.

It would require a week's hard work, even by someone quite familiar with American administration and with the trend of American policy, to be able to define exactly and consistently the existing powers of the R.F.C. Originally allowed to borrow three times its capital, it is already borrowing seven times its capital. Its resources are not obtained from the market, but mainly from the United States Treasury in order to be re-distributed in various ways. It is necessary to think in figures to get some idea of the vast scope of the activities of the R.F.C.

The following gives the proposed R.F.C. expenditure for 1934 (net after estimated repayments). The figures are in millions of dollars :

Loans to banks and trust companies	280
Loans to railroads	93
Loans to mortgage loan companies	180
Loans to Federal Land Banks	171
Purchase of bank preferred stock, capital notes, etc....	1,350
Grants to States, for relief purposes	462
Loans for drainage, levee and irrigation districts ...	50
Loans for self-liquidating construction projects	93

Loans for foreign sale of agricultural surpluses	100
Loans for domestic storage and marketing of agricultural commodities	498
Loans to joint stock land banks	81
Direct loans to farmers under the Emergency Farm Mortgage Act	200
Purchaser of Home Loan Bank Corporation Stock ...	82
Purchase of Home Owners' Loan Corporation Stock...	199
Other Expenditures	131
Total Net Expenditures ...	3,970

You will see that the R.F.C. is a vast agency spending money on an enormous scale. Its importance is re-emphasised by the fact that the latest turn in American currency policy gives it powers which one would normally associate with a central bank.

I now want to consider the various lines which the experiment has taken since the beginning of March. The first and most serious problem which the American government had to face and still has to face, is what to do with the ordinary commercial banks. At the time of President Roosevelt's inaugural address every bank in the United States had closed down, and the first problem which the government had to deal with was how to get these banks opened. There are still some 2,740 banks controlling $1,900 millions which are in process of re-organisation. These deposits are largely outside the control of the depositor.

There are four stages of action to bear in mind. The first is represented by the passage at an early date in March of an act known as the Bank Emergency Act. That Act gave the American government power over banking corporations of every State, and at the same time provided that there should be appointed a set of officials known as Bank Conservators, who were to take charge of the assets of those banks which were so weak and so bankrupt that they were not allowed to be re-opened when the Bank Holiday came to an end. Up to that time, the American government had attempted to stop the banking system from going to pieces by advancing funds from the R.F.C. against frozen assets ; since the advances have been brought to the notice of the public, many banks have not cared to make use of this facility, while those that have have become suspect. Hence, since March, it has become clearer that in order that the public confidence should be completely restored, and deposits released,

further measures were necessary. Therefore, a second phase has been entered upon. By an amendment of N.I.R.A., the R.F.C. has been given power not only to loan money to banks but to take up capital in banks in the shape of 6 per cent.[1] preferred stock.

The second stage in banking reform was the passage of an Act known as the Banking Act, to take the place of a measure which was passed in the year 1932, but never put into effect—the Glass-Steagall Banking Act.

The topical American amusement at the present time is to call the commercial bankers to Washington and to cross-examine them at great length before committees of the Senate. This process of probing the banker has been going on for the last two or three years, and in consequence of the revelations of the earlier years it was thought desirable to pass a new act by which certain practices should no longer take place. A modern version of the same policy has now been put into shape. The Banking Act does three things of very great importance. First, it has deprived the New York money market of funds by prohibiting the banks paying interest on current accounts; in consequence, the banks of the Middle West no longer send money to New York, but use it to reduce indebtedness, or place it to their credit with the Federal Reserve Banks. Secondly, you will remember that banking literature is much concerned with the effects of open market operations. Power to operate in the open market has now been taken away from the banks and has been put under the supervision of the Federal Reserve Board. Thirdly, the F.R. Board has been given certain powers of control over the lending powers of member banks of the system through ability to deprive them of the facility of borrowing from the reserve banks. The fourth and most important aspect of the Banking Act of 1933 is this: it creates an institution—the Federal Deposit Insurance Corporation—which it is hoped will avert the possibility of banking panic by guaranteeing depositors against loss. The F.D.I.C. is to collect $m 100 from the American government, $m 140 from the F.R.S., and a further amount equal to ½ per cent. of all deposits from all banks who are members of the F.R.S., and from all those who are not, who desire to insure their customers with the F.D.I.C. Amounts up to $2,500 are to be insured as to 100 per cent.; and it has been discovered that 90 per cent. of deposits are of less than $500. A large number of middle and far Western States have experimented with the guaranteeing of bank deposits of every bank in the State, hoping that if a bank failed there

[1] Since reduced to 5 %.

would be funds to protect depositors. These funds have always closed down. Unfortunately, if you are going to guarantee deposits you arrive at a position where the depositor is tempted to be less careful in his choice of banks, where the banker is tempted to be less careful in his choice of investments, and where there is a temptation to establish banks where there are already too many banks. The history of the guarantee of bank deposits in the United States up to the present is a history of unmitigated failure. The first point to bear in mind is this : no bank shall be allowed to subscribe to the F.D.I.C. until it has been inspected and approved as a bank not likely to fail. This creates a delicate problem if the public discovers that Bank X in such a town and Bank Y in another town have been excluded from the Corporation. It becomes a matter of the greatest possible importance that all banks should be proved as sound as possibly can be, for the larger the number of banks included the greater is the possibility of a new stability in the banking system as a whole. That brings the question of the power of the Roosevelt government to purchase preferred stock into the foreground. Merely to try and make as many banks as possible solvent, if not liquid, by getting them to accept preferred stock capital has not been thought sufficient. If this measure is only utilised by the weaker banks this will not satisfy the public. Consequently, the efforts of the R.F.C. at the moment are to try to make all banks accept, so that the public will not be able to discriminate as easily as it otherwise might between the sound and unsound banks. A great deal of pressure is being put upon banks to accept large amounts of money from the R.F.C. ; not very successfully in the case of New York banks which have surplus funds and regard the payment of 6 per cent. on more funds as an imposition. However, a bridge has been built between the New York banks and the Administration in this matter. First, on the suggestion of the President that the rate of interest might be reduced to 5 or 4 per cent. and further by the advice of the New York Clearing House Association to members to support the scheme. From January 1st, 1934, the greater number of solvent banks in the United States will have their deposits guaranteed by the quasi-governmental F.D.I.C., so that if the funds in the Insurance Account should prove insufficient they will have to be supplemented by the Federal government.

All this is a matter of the first three or four months. From the beginning of June, public attention turned from questions of banking to those of agriculture and industry. N.I.R.A. was not sufficient ;

as soon as there appeared a cloud on the sun of recovery, it was held that the reason must lie in the fact that banks were not lending freely enough to the public. The Government has tried to intervene in this matter also. By utilising the resources of the R.F.C., it has tried to induce lending by banks who declared, rightly, that they were only too willing to lend for the sound expansion of enterprise. About the middle of September, the R.F.C. announced its willingness to put $m 1,000 at the disposal of industry and trade through the medium of the American banking system. It would lend up to $m 1,000 to businesses which were members of the N.I.R.A. on the following terms : loans were to be made at the rate of 3 or 4 per cent. to the bank, and the banker was to re-lend the money at 5 or 6 per cent. These are rather high rates, and I doubt whether much use will be made of this facility.

There remains the problem of the closed banks ; in the last few days an attempt has been made to solve this difficulty. A statement was issued on October 15th, 1933, announcing the creation inside the R.F.C. of a new department to be known as the Liquidation Department to take over such assets of the failed banks which are considered reasonable, and to advance, not to the banks, but to their depositors up to 50 per cent. of the deposits. This will cost the R.F.C. at least $m 1,000. That is the latest of the series of efforts made to clear up the banking muddle.

I turn now to another side of the same problem—the capital market. It is clear that recovery is impossible unless the heavy trades and the constructional trades can recover ; and the revival of the heavy industries in the slough of the trade cycle is traditionally associated with the revival of activity in the long-term capital market. What has the administration done ? It has passed an act—the Securities Act—which is perhaps the best-hated piece of legislation of the Administration. A great deal of criticism has been passed, and rightly, upon the manner in which certain securities were placed on the American money market, and it was said that new legislation was required. The Securities Act is such an effective piece of legislation that in the last few months there have been practically no issues of securities by private corporations. American bankers have found a new weapon of criticism. The ordinary Wall Street argument is that the continuation of slump conditions in the security market is to be ascribed to the effect of the new Securities Act. By this legislation any issuing house which makes an issue to the public is bound in law for the truth of the statements

contained in the prospectus ; if it can subsequently be proved that any of these statements were erroneous any holders of the security can sue in law, not only the person who got the money, but the issuing house itself. Any issuing house in the United States under the Securities Act becomes responsible to the community not only for its own mistakes but for the mistakes of promoters. With conditions as they are bankers naturally say the liability is too much for those responsible.

There is a body known as the Federal Advisory Council which is a consultative body of business men who act with the F.R.S. On September 16th, the F.A.C. rightly published a resolution of protest against the effects of the Securities Act, and whether it is due to the Act or not, the fact remains that although there has been considerable activity in industry as a whole the volume of securities issued in the last few months has been surprisingly small. The market for capital in the United States has become almost entirely a market dealing in government and municipal securities ; and a consequence has been that the public debt has in recent months been growing at an appalling rate. The Securities Act has done for the United States roughly what interference with certain sections of the market by the Treasury has done for the British capital market. The total amount of private capital which is being issued is almost negligible. The general opinion in financial circles is that no possible progress can take place until the Securities Act is amended.

To turn to those particular aspects of American finance in which this country is most interested—the problem of the American attitude towards the gold standard and the American price level. I will divide this into two heads—first, the position as regards the dealings in gold. The United States has seen the need to abandon the gold standard,[1] but it is important to understand how this was done. It really abandoned the gold standard from the moment of the President's proclamation on the afternoon of his Inaugural Day. There was no formal declaration that the United States had abandoned gold. The gold policy of the United States has in part taken the form of a resolution by which the gold clause has been abandoned in American contracts. That is the most far-reaching of the measures, for a reason which is not always fully appreciated. There is hardly a bond or investment security of any kind issued in the United States which was not until recently expressed in terms of dollars of " current weight and fineness." The resolution of the two

[1] And since the need to return to it.

Houses of Congress is, therefore, very much more far-reaching in its implications, because so long as the legality of this particular joint resolution is unchallenged, it affects the average American very greatly—in other words, the holder of any interest bearing security, and, indeed, the holder of any short term securities expressed not in U.S. dollars but in U.S. dollars of a defined weight and fineness in terms of gold. The resolution of the two Houses of Congress by which in effect the gold clause has been abandoned marks the *de facto* departure from the gold standard. It affected the average American more than the mere refusal of the export of American gold could possibly do.

I come to the second main aspect of the subject, namely the price policies of the American Administration. It is well known that the desire of the United States government is to raise prices. From the very beginning of his administration, President Roosevelt has made no secret of this fact, and the level of prices it is required to restore is the level of prices of the year 1926. I think there is no other reason why the year 1926 was chosen rather than the year 1928 or the year 1924 than this : the index number of prices which is most frequently taken is based on the prices ruling in the year 1926.

Administration is trying to raise prices in four ways—the fourth way, the way of the N.I.R.A. and the Agricultural Adjustment Act I will describe later. The first point to bear in mind is this. There still exists an American central banking system, and the time is not long past when it used to be of the highest standing in the United States and elsewhere. The accepted way of raising prices is by the purchase of securities by the Central Bank, and this the Federal Reserve system has done. Commencing its operations by buying about $m 10 of stock, it raised the weekly quota of purchases to $m 35 a week. If you look at the balance sheets of the Federal Reserve system to-day you realise almost with a shock that it is an enormous investment trust holding two kinds of assets, namely, gold[1] and United States government securities. The whole commercial policy by which it is hoped to exercise pressure has completely gone by the board. Practically speaking, the F.R.S. holds no commercial open market assets, and if there comes a sharp fall in the value of U.S. government bonds a grave problem will arise. What the F.R.S. has done has been to purchase securities : thus sustaining the price level of bonds. When security prices turned downward, very low rates for accommodation

[1] Now substituted by gold certificates.

were quoted by the central banking system, but with little effect; broadly speaking, all it can actively do is to buy government securities. This constitutes a problem of very considerable importance. When the Federal Reserve system buys securities the money that it pays for these securities directly or indirectly passes into the possession of the commercial banks. Consequently the commercial banks' reserves increase to make them more disposed to lend. In fact, there has been no such effect. At the present time, the commercial banks are holding at the F.R.S. something like $m 700 more in the shape of balances than required under the rules governing the operation of the F.R.S.[1]

The second method by which the government proposes to raise the price level is by expenditure on public works. If you spend money in building roads, bridges, and dams, you put money in people's pockets with which they can increase their consumption, and support or perhaps augment the total consumption of goods. The Administration is a convert to this doctrine. In Part III of N.I.R.A. there is created a department concerned with the administration of public works expenditure which can spend up to $m 3,000; but public works expenditure has become a somewhat elastic term—comprehending for instance the mechanisation of the army. At the moment this policy is more dilatory than effective.[2]

The inflationary powers of the administration, conferred upon the President in the spring of this year, are granted in a very inappropriate place—namely, in clauses of the Agricultural Adjustment Act. He is authorised to do three things. He can induce the Federal Reserve system to buy government securities in the open market up to a total of $m 3,000. I emphasise the fact that the F.R.S. has purchased securities at the rate of some $m 30 or one per cent. of the total each week. The second power is a much more serious thing. It gives the President power to issue certain kinds of notes to a total of $m 3,000 for the retirement of maturing U.S. obligations. Instead of the government paying them off by re-borrowing from the bankers, the government can pay them off by the expedient of printing notes. This is talked of as "greenback inflation." The third power which is conferred on the President is the power to cut the gold content of the dollar up to 50 per cent. of its normal gold value.[3]

What does public opinion think of these things? There are, roughly, three schools of thought in the United States—or if you

[1] Since increased to over $900,000,000.

[2] Since this was written the whole amount has been appropriated.

[3] Since this lecture this power has been used to devalue the dollar.

like four. There is the die-hard school which mutters in corners, and which says that the United States ought never to have abandoned gold : they are never heard in public. There is, secondly, what you might call the moderate school—the Mr. Baldwins of America—who believe it necessary to placate the inflationary element and devalue the dollar by around 30 or 40 per cent. That school is represented by the Treasury and by the older hands in Wall Street, but it " cuts no ice " with the President. There is the rough-necked greenback inflation school, represented by Congress and some of the farmers, which in my opinion is still a potential menace. That is the school which says the way to solve the difficulties is to pay back debt in printed notes. These views were held by something like two out of three members of Congress, and by a very large percentage of farmers, and by a very large proportion of people in the States. Greenback policy is a policy to be watched, because it can be tried when other methods have been failures. The fourth school is the school of the left—represented for instance by Mr. Wallace, the Secretary of Agriculture. This also wants devaluation—to the extent of 50 per cent. because they have a rather naive belief that if you cut the gold content of the dollar by 50 per cent., in a very short period of time all prices in the United States will double. This is a very simple interpretation of the situation, but it is held by large numbers of people.

How are we to understand the present position ? The present developments, still in a very embryo state, represent the last chance for the government before it has to resort to more direct measures. The commodity dollar of which we have heard so much is a very simple thing to understand. It is an attempt to combine three things : first, a rise in prices ; secondly, stabilisation of prices ; thirdly, an attempt to keep the value of the dollar not constant in terms of gold, but always with a certain gold value. Under the gold standard, prices varied and the gold value of the currencies remained constant ; under the new standard the commodity value of the dollar has to be constant and the gold value has to fluctuate. Is the United States even within shooting distance of the commodity dollar ? Certainly not—for two very simple reasons. In the first place, the commodity dollar is only to begin to operate when prices are up to the 1926 level. At present prices are running away from the 1926 level rather than going back to it.[1] The problem of how to get them up has not been solved. The second point is this : there is no

[1] Since this lecture was delivered prices have made some recovery—possibly because of the increased costs of production imposed under N.I.R.A.

inference whatever that the price level can be kept at the 1926 level even if you ever get it back there. The important practical point is this : prices have not gone up, and all that the government has done so far is to cause the external value of the dollar to fall and to make quite certain that henceforward the current external value of the dollar shall not rise above the gold value which they fix for it. But merely saying that an ounce of gold shall henceforward be worth 35 American dollars, merely because you raise the value of gold in terms of the dollar, does not by any means make it certain that you will be able to lower the external value of gold, or lower the internal purchasing power of the dollar. The final outcome is the most appalling. It sets up a new international competition in the depreciation of currencies.[1] While the external value of the dollar has been falling in this way American prices have been going down. Together these two movements have been putting a very considerable pressure on the international price level, and have sent gold prices down instead of up. We are back in one of those bad patches in which the vagaries of American finance and industry are liable to upset the whole world.

II

What is known as the National Industrial Recovery Act began its career very early in the history of the Roosevelt régime, but although this is perhaps the most revolutionary piece of legislation since the end of the Civil War, it is exceedingly difficult to trace its legislative history. If it has any history at all, its background comprises two or three pieces of legislation introduced in the lower house of Congress, the more important of which were concerned with reducing the hours of labour to 30—36 per week. By the time of President Roosevelt's inauguration a strong section of American opinion was veering round to the point of view that the causes of the continuance of unemployment in the United States were to be found in the progress of technical improvement, and in so far as N.I.R.A. has any legislative history, it owes its birth to such views—which were held in extreme form by the Technocrats.

In view of the importance attributed to this Act, it is as well to remember two critical dates in the recent history of the United States. N.I.R.A. was signed by the President on June 16th. The sister Act—the Agricultural Adjustment Act—was signed five weeks before then, and yet to us in this country N.I.R.A. has appeared of much more importance than A.A.A. The fate of the administration

[1] This competition has been made less menacing by the stabilisation of the gold value of the dollar.

and the fate of the economic future of America hangs very much less upon what is going to happen in the sphere of economic reform, than in the sphere of agricultural re-adjustment. The critical date is June 16th because it enables one to measure the influence exerted upon economic progress in the light of actual historical facts. Up to that date recovery was rapid and in fact the maximum point in post-depression production was reached in July when the index of production had shot up from 60 to 100. I am not going to criticise the Act at this stage. I want to do two very different things : first, to attempt an explanation of the economic principles behind N.I.R.A., and to analyse its provisions and the way in which the scheme has been administered. The economic theory behind it seems to some people to be both simple and profound—to others, simple and ill-conceived. We are familiar with the real philosophy which lies behind the N.I.R.A. because it is preached on as many platforms in this country as it has been in the last few months in the United States. The philosophy of N.I.R.A. is based upon two simple and fundamental ideas. First, that you can increase the volume of consumers' purchasing power by reducing hours and raising wages, and that you can supplement and fortify the aggregate growth of purchasing power by a programme of public works. If you cut down the number of working hours per man you have to employ more men to do the same work ; if hourly wage rates are increasing, or even, perhaps, if they are kept constant, the aggregate amount spent increases. Consequently there will be a greater aggregate demand by consumers, and since a greater aggregate demand for products implies the possibility of sustaining a larger volume of production, you have solved the problem of those industries manufacturing goods consumed by the average individual. It is recognised that this policy does not necessarily improve the position of the constructional trades, but you can stimulate the production of capital goods by public works, and since public works involves heavy wage payments you kill two birds with one stone. The fate of N.I.R.A. turns upon whether or not this particular interpretation of cause and effect in the economic sphere is justified. If the theory is true the American economic problem ought to be solved. There are many reasons why, in the early days of N.I.R.A., that Act, although based upon a radically unsound theory, might nevertheless have co-existed with an improvement in the economic situation, although the effects of N.I.R.A. might not have been the cause of it. Nevertheless, in the long run economic legislation based upon fundamentally unsound principles will display itself in the trend of

American economic evolution. To my mind the Act is based upon a fundamentally unsound principle : moreover, since the United States applied this particular piece of legislation at a time when the level of working costs was already above the level of effective selling prices, the effect must be to make the ultimate situation worse by driving costs up still more. That is my own personal view.

The object of the Act is either to re-organise each American industry by means of the formation of so-called " codes of fair competition," or to re-organise particular firms by means of adherence to a so-called general code drawn up by the President himself. The re-organisation of American industry is to proceed along one or other of two parallel lines. Subject to certain safeguards to eliminate certain kinds of competitive action, the codes that trade associations draw up are to receive the assent of the government and to receive the sanction of law. In those cases in which the industry is either unable or unwilling to draw up a code for itself, the President is prepared to draw up a code ; while the President is empowered to enter into agreements with individuals by which they adhere to the terms of the code drawn up by him. The tendency is this : those industries in which the number of producing units is small, are devising their own codes, but although there are now some eighty codes the greater part of the codification, if you can call it such, which has been going on since the middle of June takes the form of adherence to something which is known as P.R.A.—the President's Re-employment Agreement—which is merely a blanket code provided by the American administration. It will be seen that the purpose of N.I.R.A. is to organise everybody into a system which adheres to certain standards of commercial morality, and to certain standards of employment and wage rate payments. The other important element has been a point of difficulty in the practical administration of the Codes. This is Section VII of the Act which makes certain provisions for collective bargaining. That is in the eyes of many people a barrier in the way of the liberty of the American workman. Where an industry is unable or unwilling to arrive at such a collective agreement with its own work-people, the President can order an enquiry ; and if he thinks it proper can impose on the industry such conditions of labour as seem best to him.

That is N.I.R.A. in the widest possible terms—the codification of relations between employers in a particular industry and the codification of relations among employers and employed over an entire area in which they come into contact. The Act does certain other things : it provides that the President shall have control over

the oil industry ; and it does one thing which shows how very much in recent years America has drifted away from concepts which were popular in Democratic circles ten or fifteen years ago. The codes approved of under N.I.R.A. are exempt from the provision of the anti-trust laws. The Act in the first instance has a life of exactly two years. In other words, if one asks whether this Act really typifies a permanent change in the social philosophy of America or a desperate remedy for a desperate situation, I think one has to admit that it is a pure piece of experiment.

We must not imagine that in this particular matter the psychology of Americans is that of Europeans. It may work well ; it may work badly ; but it is being tried. How has it been working ? Now I suppose an ounce of experience is worth a ton of description. I have seen the N.I.R.A. Administration at work. The two overwhelming impressions I got about it were these. That everybody is being steadily and remorselessly worked to death and as a consequence everyone is tired. The second thing which I find was characteristic of the administration was a certain underlying scepticism as to whether it was all going to pan out as beautifully as Congress thought.

The organisation of the administration is this : there are bodies representative of the various economic interests of the country. There is the National Advisory Committee ; there is the Consumers' Advisory Council ; a Council representative of employers and one of Labour. It is the duty of the administration to hold hearings on the codes, and among the persons who must be heard are the members of the various councils. So must other members of the industries who are affected by the provisions of any particular code. When approved, it is submitted to General Johnson and then to the President before it obtains the force of law.

The Government tried to get the public to believe that by means of this Act it would be possible to reduce by 50 per cent. the existing volume of unemployment, estimated at anything from ten to thirteen millions on September 4th. It was necessary, therefore, to work up an immense enthusiasm, otherwise people would not behave as the Act required them to behave, and there was the usual danger that the zeal of the adherent would evaporate as rapidly as it had been kindled. America is still a democratic country and a reaction very speedily developed against the solving of economic problems by methods of oratory. Mr. Walter Lippman—a democrat, and the most famous of the leader writers of the United States—has found it necessary in his very widely circulated publications to utter more than a note of warning to the Administration against the attempt to

rush the public off its feet. There are, however, certain specific difficulties that N.I.R.A. and its administration have raised. In the first place, Section VII of the Act raises the same kind of problems that are always raised when the status of Trade Unionism is brought to question. The three problems raised by this specific grant of the right of collective bargaining are these : there is the question of the " open-shop " and the industry refusing to recognise it ; the question of the company union against the industrial union ; and finally, the issue raised by the reservation by certain industries of the right to promote and pay workers according to merit. I mention these things because they have been serious difficulties with which the administration has had to cope, and unfortunately, General Johnson and the President have not always been consistent in the advice they have given to industries in connection with these questions. Again, from a very early stage in the history of the administration of the Act, differences of point of view developinside N.I.R.A. It is not surprising. Inside the major sections of N.I.R.A., serious difficulties have resulted in the resignation of a number of the friends of General Johnson who took the view that it was not any part of the business of the United States to encourage Trade Unions to grow at this rate. Exactly the same difficulties occur in all governments, good and bad. But looking at the thing from a wider point of view there have been more serious difficulties than these. There has been an epidemic of strikes in the United States of a very serious character. I do not know that one ought to take this striking of American workers quite as seriously as is being done in America to-day. Some of them have been quite light-hearted : some of them are, undoubtedly, much more serious, but there has perhaps been too great a tendency to exaggerate the influence of N.I.R.A. upon the bellicosity of labour. Finally, charges that the Act is being broken are immensely widespread on both sides, while allegations of " chisselling " are very frequent.

I cannot conclude without at any rate saying one word about the sister Act—namely, the Agricultural Adjustment Act, intended to pour blessings on the unfortunate head of the American farmer. A.A.A., like N.I.R.A., does a whole series of things. Let me again try to confine myself to outlining two important things that it tries to do. In the first place it provides $m 2,000, by which part of the farm mortgages of the United States are to be paid up by the Federal Credit Administration, so that the farmer may be (partially) relieved of the burden of debt charges. Then there is the Home Owners Act, by which a further $m 2,000 are to be borrowed to pay off original

mortgages which are to be replaced by debts carrying a lower rate of interest. That is the minor side of the thing—primarily, its object is this. It tries to bring about a situation in which the leading agricultural products—cotton, wheat, corn and hogs—will sell at prices such that if they are compared with the contemporary prices of the things the farmer buys, the farmer will get on the average the same amount of things that he obtained in the years 1909-14.

The intention is perfectly clear. The Administration is trying to restore the farmer to the same relative position that he was in during the five years before the war. In this particular case you do it by copying on a particularly generous scale certain effective experiments which have been made by the British Ministry of Agriculture. The Secretary of Agriculture is to enter into contracts with the American farmer by which the latter agrees to cut down his crops by certain pre-defined figures, the idea being to reduce output and therefore to raise prices. In return he obtains a benefit. This financial operation is to be financed out of the so-called processing taxes on the domestic manufacturers who use the commodities directly or indirectly in their industries. The amount of processing tax is ideally to be determined in this way : it is the difference between the market price and what can be called its " fair exchange value." You must thus recognise that this might involve such an enormous tax that the commodity in question would be subject to severe competition from substitutes. Consequently, the Secretary of Agriculture may impose a processing tax on any alternative commodity which can be used.

How has this particular piece of agricultural empiricism worked ? The result so far has simply been increasing embarrassment. In no case has the method worked out to plan. To take one notorious example, " the slaughter of the innocents." In the United States, there is one important cross-relationship in agriculture between the production of maize on the one hand and the production of pigs on the other—the so-called " corn-hog equation." It was discovered about the beginning of September that pig production was such that prices were being forced down ; the Administration bought 6 million pigs, and slaughtered them. Unfortunately, this action has been followed by dire consequences. The processing tax on pigs together with this slaughter caused substitutes to be used for lard and other pig products, while the slaughter of pigs was naturally followed by a fall in maize prices that necessitated the imposition of a further processing tax on maize—the raw material of the pig farmer.

The most appalling muddle has been in connection with the cotton crop. The pressure put on the Administration has been sufficient to cause a third new cotton scheme to be devised,[1] and the present position is this : there was created on October 17th the Federal Credit Commodity Corporation which is buying up from the farmer of the United States his unsold cotton at 10 cents. per pound, and if this proves successful in the case of cotton one may be certain that similar experiments will be tried. It must be admitted that the Administration's agricultural policy has so far done little except rouse the resentment of the farmer. I think it must be confessed that if you test the American experiment in the only way in which it can be tested, by appeal to the facts of the case, it must be admitted that President Roosevelt's experimentation has been a failure. Unemployment has not been cut down by 50 per cent. ; the standard of life of the farmer has not be raised appreciably ; the volume of production is hesitant and the level of costs is going up.

I ventured to suggest to you at an earlier stage that the failure or success of N.I.R.A. holds out two lessons for us. The first is this : the way to lift a country out of the depression is clearly not to reduce hours all round and not to raise wages all round. The second fact which I think is confirmed by the American experiment is this : whatever the theoretical merits of vast expenditure on public works may be, practically it is impossible safely to improvise schemes which are capable of spending an immense amount of money. The most outstanding aspect of these experiments has been the comparative difficulty of doing anything quickly in the sphere of public works expenditure. Why is it then that everything looked rosy in the early months ? I say that the improvement in the position of American business in the early summer of this year was not due to N.I.R.A. but in spite of it. People expected two things—they expected rising prices and a rise in costs. They therefore covered themselves so long as the going was good. As N.I.R.A. has not been successful in increasing employment as rapidly as it was hoped it would, this rise in industrial costs and in retail prices has simply meant that the capacity of the public to pay these higher prices is becoming undermined.[2]

T. E. GREGORY

[1] The schemes by which the Stabilisation Corporation and the Federal Farm Board held cotton to maintain prices, stocks which were liquidated largely by gifts to charitable associations and by the payment of bonus of cotton to farmers restricting acreage—an invitation to gamble in the cotton market, were found to be both costly and useless, and from some points of view more an aggravation than a solution of the problem.

[2] Witness the recent complaint (March, 1934) by the Consumers' Advisory Council.

THE RELEVANCE OF POLITICAL ECONOMY

WHEN the problem with which the economist is concerned is reduced to its narrowest dimensions it is a problem of how the occupied members of a community seek to satisfy their own wants and the wants of those who are dependent on them. Theoretically it is conceivable that individuals might seek to satisfy these wants by their own isolated activities, but, in such case, they could hardly be regarded as members of a community. As members of a community their activities are specialised, and their wants are satisfied not so much by things which result directly from their own activities as by things which accrue to them by a process of mutual exchanging. However far this process develops, the impulse behind it is the desire for an ampler satisfaction of wants which are ever ready to expand in variety or number. As the process develops there grows up an economic system, and, as the system grows, it becomes more complex, and the problem with which the economist is concerned assumes a multitude of aspects, but, at bottom, the problem remains the same.

When the problem is viewed from this angle the celebrated maxim of Adam Smith that " consumption is the sole end and purpose of all production " would seem as self-evident as he claimed it to be, and, when we bear in mind that producer and consumer are simply terms for two aspects of every occupied person, the second part of the maxim that " the interest of the producer ought to be attended to only in so far as it may be necessary for promoting that of the consumer " if not quite so self-evident, has still powerful argumentative force. The maxim appears, of course, in the famous chapter in which Adam Smith indicts the mercantile system on the ground that under that system " the interest of the consumer is almost constantly sacrificed to that of the producer " and that " it seems to consider production and not consumption, as the ultimate end and object of all industry and commerce." How the interest of the consumer was being sacrificed to that of the producer was by restraints and regulations which restricted supply, which meant that a sectional interest was being placed before the general interest.

It was the interest of each producer that his supply should be limited, but it was the interest of each consumer that all supplies should be as ample as possible, and everyone was a consumer, or, at any rate, a potential consumer of all supplies. Even though each consumer, as a producer, were in a position to restrict his supply to other consumers, he would be at the mercy of other consumers as producers, and not every producer was likely to be of equal strength with other producers in securing restrictions on his supply. If all producers were, indeed, of equal strength then each would succeed only in defeating his own object. On such lines might a general vindication of the second part of Adam Smith's maxim be formulated.

In the light of this maxim it is not difficult to understand the attitude of the most authoritative economists in this country to the problem with which they were concerned for at least a century after the time of Adam Smith. Accepting consumption as the end to which production was the means, they exerted their influence, in general, to the removal of restrictions which in their view would limit supply, and their attention was mainly directed to the conditions under which they considered the most ample supply would be forthcoming. It was thus that the political economy of the period had a definitely practical side which found expression in a general, as distinct from a detailed, support of a policy of non-interference by the State in economic affairs. Consumption as the end of production being taken for granted, and freedom of competition assured, those who made themselves responsible for the provision of supply might be left to obtain prices for their supply which, if the forces of competition were allowed to work freely, would always tend to correspond with the costs they had incurred, plus a profit which again tended, in general, to be at the same rate over the whole field of production.

The economic progress of the country during the century following the publication of the *Wealth of Nations* does not require re-statement, and while it would be incorrect to say that, during the period, political economy had passed without serious criticism either on its practical side or in its analysis, there can be no doubt that, in both aspects, it had gained widespread acceptance. Probably, in the case of many, the acceptance was due mainly to a recognition that the practical effect of political economy had been to assist the economic progress which had been made, without much reference to the question of whether the analysis of the economists was accurate or not. The economists themselves, however, while they were more concerned with this question, and were not unprepared to modify

their analysis in details, were insistent on the importance of the part which they conceived political economy to have played in the economic progress of the century. In 1870 Professor Cairnes set forth his view that " while we have led the van in economic speculation we have also been the first to apply our theories to practice. Our foreign trade, our colonial policy, our poor-laws, our fiscal system, each has in its turn been reconstructed from the foundation upwards under the inspiration of economic ideas ; and the population and the commerce of the country, responding to the impulse given by the new principles operating through these changes have within a century multiplied themselves manifold ; " while Walter Bagehot, six years later, dating the rise of English political economy from the publication of the *Wealth of Nations* in 1776, was of opinion that " it has had a wonderful effect. The life of almost everyone in England—perhaps of everyone—is different and better in consequence of it. Ideas which are paradoxes everywhere else in the world are accepted axioms here as a result of it. No other form of political philosophy has ever had one thousandth part of the influence on us ; its teachings have settled down into the common sense of the nation and have become irreversible."

Yet, strangely enough as it appears, both the writings from which the above quotations have been taken had been impelled by the concern of the writers at the prevailing indifference to political economy. Bagehot was convinced that " the position of our Political Economy is not altogether satisfactory. It lies rather dead in the public mind. Not only does it not excite the same interest as formerly but there is not exactly the same confidence in it. Young men either do not study it, or do not feel that it comes home to them and that it matches with their most living ideas ; " while Cairnes, pointing out that there were three chairs in London from which political economy was taught—two at King's College, and one at University College—had to regret that the aggregate number of students attending the economics schools in London fell very much short of one hundred individuals, and that University College could not claim a quarter of the number.

Both these eminent men were of opinion that at least part of the explanation of the situation was that people had become so familiar with the good which political economy had accomplished that they had ceased to appreciate it properly, but neither of them regarded this familiarity as a complete explanation of the indifference to the subject. Cairnes thought that the root of the matter was the current

notion that political economy was simply a sort of scientific rendering of the maxim of *laissez-faire*, a notion which he admitted fell in very well with most of what was known of the practical application of the science. Moreover, he was ready to admit that if *laissez-faire* was the sum and outcome of political economy, then, in this country, in view of what had been done in the way of removing restraints and restrictions on economic enterprise, the future field of activity for political economy was a very narrow one. But he was not prepared to accept the conception of political economy and its function herein implied.[1]

For our purpose, however, Bagehot's treatment of the prevailing indifference to political economy is more important than that

[1]The views of Cairnes on this matter are still of sufficient interest to warrant quotation: "Political Economy is a science in the same sense in which Astronomy, Dynamics, Chemistry, Physiology are sciences. Its subject matter is different; it deals with the phenomena of wealth while they deal with the phenomena of the physical universe; but its methods, its aims, the character of its conclusions are the same as theirs . . . it expounds the laws of the phenomena of wealth . . . it stands apart from all particular systems of social or industrial existence. It has nothing to do with *laissez-faire* any more than with communism; with freedom of control any more than with paternal government or with systems of *status*. It stands apart from all particular systems, and is moreover absolutely neutral as between all. Not, of course, that the knowledge which it gives may not be employed to recommend some and to discredit others. This is inevitable, and is the only proper and legitimate use of economic knowledge. But this notwithstanding, the science is neutral as between social schemes, in this important sense. It pronounces no judgment on the worthiness or desirableness of the ends aimed at in such systems. It tells us what their effects will be as regards a specific class of facts, thus contributing data towards the formation of a sound opinion respecting them. But here its function ends. The data thus furnished may indeed go far to determine our judgment, but they do not necessarily, and should not in practice always do so. For there are few practical problems which do not present other aspects than the purely economical—political, moral, educational, artistic aspects—and these may involve consequences so weighty as to turn the scale against purely economic solutions. On the relative importance of such conflicting considerations Political Economy offers no opinion, pronounces no judgment, thus standing neutral between competing social schemes, neutral as the science of mechanics stands neutral between competing plans of railway construction, in which expense, for instance, as well as mechanical efficiency is to be considered; neutral, as Chemistry stands between competing plans of sanitary improvement; as Physiology stands neutral between opposing systems of medicine. It supplies the means, or, more correctly, a portion of the means for estimating all; it refuses to identify itself with any." This quotation is so clear in its meaning that it requires no comment. In answer to those who suggested that economic science had done its work Cairnes insisted that it belonged to a class of sciences whose work could never be completed so long as human beings continued to progress; the changing needs of an advancing society would evolve new problems for the economist and call forth new growths of economic doctrine.

This quotation and the other references to Cairnes may be found in a lecture delivered at University College in November, 1870. The lecture "Political Economy and Laissez-Faire" is included in his *Essays in Political Economy Theoretical and Applied*, published in 1873.

of Cairnes and requires statement at greater length. In the essays which appeared in 1876, and which were re-published later in the well-known book under the title of *The Postulates of English Political Economy*,[1] Bagehot also recognised that the influence of political economy in England had been strongly in favour of non-interference by government, and, as " all governments like to interfere ; it elevates their position to make out that they can cure the evils of mankind," he too attributed the unpopularity of English political economy, especially in other countries than England, largely to this fact. But, as Bagehot saw the situation, there was a more important consideration which, even in England, had not been thoroughly understood, namely, that English political economy was applicable only to " states of society in which commerce has largely developed, and where it has taken the form of development, or something near the form, which it has taken in England." Moreover, in its analysis, it assumed the principal facts which made that commerce possible and, " as is the way of an abstract science, it isolates and simplifies them." Thus, with the warning that English political economy was an abstract science, and " that men are not like this " he states that " dealing with matters of ' business ' it assumes that man is actuated only by motives of business. It assumes that any man who makes anything makes it for money, that he always makes that which brings him in most at least cost, and that he will make it in the way that will produce most and spend least ; it assumes that every man who buys, buys with his whole heart, and that he who sells, sells with his whole heart, each wanting to gain all possible advantage."

Evidently this statement contains many postulates but, in the essays referred to, Bagehot was able to treat only of the two postulates of the transferability of labour and the transferability of capital, both of which are clearly implied in the statement. Even so, what the essays contain enables us to see, through the eyes of an acute observer, the significance of these postulates in political economy as it was conceived of in England in 1876, and, in addition, some indication is given of the actual conditions to which the postulates were regarded as relevant. The meaning of the postulates, as stated by Bagehot, was that " labour and capital circulate rapidly within a nation from employment to employment, leaving that in which the remuneration is smaller and going to that in which it is greater."

[1] The essays appeared in the *Fortnightly Review* and the book, with a preface by Professor Marshall, was published in 1885. All the quotations relating to Bagehot in this article are from the book.

While he considered that capital moved so freely from trades where the profits were low to trades where the profits were high that there was a tendency to a general equality of profits, he recognised that labour did not move as freely as capital. But how nearly he held that the postulates of both were justified in fact when he wrote may be seen from his comment that " no assumption can be better founded, as respects such a country as England, in such an economic state as our present one. . . . No doubt there are, even at present in England, many limitations to this tendency both of labour and capital, which are of various degrees of importance, and which need to be considered for various purposes. There is a 'friction' but still it is only a 'friction'; its resisting power is mostly defeated and at first view need not be regarded."

The significance of this comment is, apparently, that when Bagehot viewed the actual conditions he saw around him in 1876 he considered that between these conditions and the postulates of the transferability of labour and capital there was a close relevance. With his complete statement of the conditions requisite to this transferability we need not concern ourselves. More important is the description he gives of the way in which these conditions were fulfilled in England. So far as labour was concerned, a central condition was that labour must be able to move easily and at will from employment to employment, which implied that there must be such employments, a condition which in England was certainly present. But " employment in any large trade implies an 'employer.' The capitalist is the motive power in modern production. He settles what goods shall be made, and what not; what brought to market, and what not. He is the general of the army; he fixes on the plan of operations, organises its means, and superintends its execution. If he does well, the business succeeds and continues; if he does ill, the business fails and ceases. Everything depends on the correctness of the unseen decisions, on the secret sagacity of the determining mind . . . the whole is an affair of money and management; of a thinking man in a dark office, computing the prices of guns or worsteds. No doubt in some simple trades these essential calculations can be verified by several persons —by a board of directors or something like it. But these trades, as the sagacity of Adam Smith predicted, and as painful experience now shows, are very few; the moment there comes anything difficult or complicated, the Board 'does not see its way' and then, except it is protected by a monopoly, or something like a monopoly, the individual capitalist beats it out

of the field." At the centre of economic organisation in England in 1876, therefore, Bagehot saw the individual capitalist-employer in response to whose decisions, as they found expression in remuneration offered, transferability of labour from employment to employment was made effective.

But as Bagehot recognised, transferability of labour involved transferability of capital, indeed, as he further recognised, the latter was antecedent to the former. For the transferability of capital the chief conditions were that there must be trades between which capital could freely move, and the profits of these trades—'that which is over after the capital is replaced'—must be comparable in terms of a common medium, money. Transferable capital was regarded by him, in the first instance, as consisting pre-eminently of money which, when expended, resulted in the production of concrete capital in the form of "two unlike sorts of artificial commodities—co-operative things which help labour and remunerative things which pay for it" exemplified respectively by a steam engine and a gimlet, and a loaf of bread and a piece of bacon. Regarding capital in these senses it was principally remunerative capital that was transferable from employment to employment, the effects of the transfer being a change in the labourers who got the commodities of which the capital consisted, with a change in the character of the commodities and increased activity in the trades engaged in making them, if the transfer was from a trade which employed little skilled labour to one which employed much. On the other hand, the transfer of co-operative capital, where that was possible, meant the bodily transfer of tools and machines but, in general, the effect of transferability on co-operative capital was to change the speed with which existing machines were worked out, and the sort of new machines which should be made, the "live-skill" of an artisan being treated as a machine. But, as just mentioned, transfer of capital involved in the first instance a movement of money and this money was available in England from three principal sources. First, there was the loan fund of the country in the hands of the bankers and bill-brokers which moved in an instant towards a trade that was unusually profitable; second, there was the speculative fund, largely composed of the savings of men of business, which was always ready to go into anything which promised high profits; and third, there was the incessant movement of young men with new money into very profitable trades which tended to reduce that profitableness to the common average.

It must surely be impossible to compress within smaller compass a more complete and clearer account of the general economic organisation of a country and of the general theory of its operation than Bagehot gives in these brief extracts. In them we see economic organisation in England as consisting predominantly of separate businesses, each with a capitalist-employer at the head of it in competition with other capitalist-employers, they and those whom they employed readily transferring themselves here and there in response to the magnet of remuneration, their transference being facilitated by the existence of an ample supply of readily transferable capital. In Bagehot's view the actual conditions in England in 1876 were such " that the free movement of capital from employment to employment within a nation, and the consequent strong tendency to an equality of profits there, are ideals daily becoming truer as competition increases and capital grows." Moreover, he expected that these conditions would extend and compel a modification of the teaching of English political economy " that capital fluctuates from trade to trade within a nation . . . and will not as a rule migrate beyond that nation." Although he did not anticipate that capital would move so freely between nations as to bring about that equality of profits to which there was a strong tendency within a nation, he insisted that the existence of a cosmopolitan fund " which runs everywhere as the rate of interest tempts it," of a speculative fund which " runs from country to country like beads of quicksilver " and of young men " who transfer capital from country to country with a rapidity formerly unknown " was making the doctrine of the immobility of capital between nations inappropriate to fact.

It was by this economic organisation which Bagehot describes, working in accordance with the theory which has been indicated, that, in England, perhaps in no very deliberate way, effect was given to the maxim of the supremacy of the interest of the consumer during the century after the maxim was stated. And for many years longer England's economic progress continued on lines which seemed in large measure to verify Bagehot's forecast of the future. But, even as Bagehot was writing, changes were proceeding which, as may now be seen, were destined at least to distort his forecast. In the first place a certain amount of doubt had made its appearance on the theoretical side of political economy. To this doubt John Stuart Mill had certainly contributed by his repudiation, in 1869, of the doctrine of the wage-fund which, as he admitted, weakened the case which denied that trade combinations could raise wages.

Supplementing Mill's contribution there were the attacks which, in 1870, Cliffe Leslie had begun to make on the validity of the abstract method in political economy, while Cairnes, by the publication of the essay already mentioned, and, in 1874, of his book[1] in which he insisted on the importance of the conception of "non-competing groups," must have added his quota to the doubt. Finally, there was Stanley Jevons who, in 1862, had placed before the British Association what he had come to regard as "the true Theory of Economy," and who, in 1871, had given this theory wider publicity in his *Theory of Political Economy*.

Presuming that the political economy inaugurated by Adam Smith had had some influence in giving a direction to men's thought, and that it had thus helped to create the conditions of the economic progress which had been made, the existence of this doubt among economists could hardly fail to weaken that influence. But in the second place, and of more importance, changes relating to economic organisation were proceeding, different in character from those of which Bagehot had perception, changes which became more and more significant as the nineteenth century wore on and passed into the twentieth century. These changes were the increasing use of highly specialised long-lived capital in production, with an enlargement in the size of business units, both of which were connected with an extension of the company form of organisation of which Bagehot had spoken so disparagingly.[2] Also, in some directions, there was a tendency for these business units to amalgamate for industrial and commercial purposes, and, more generally, on both the sides of capital and labour, there was a growth and strengthening

[1] *Some Leading Principles of Political Economy Newly Expounded.*

[2] In 1876 Bagehot's disparaging remarks had, no doubt, some justification, although there is now good reason to believe that the slow development of the company form of organisation was not so much due to economic deficiencies as to the existence of legal obstacles. Apparently Bagehot did not realise the importance of the impetus which had been given to the formation of companies by the Act of 1862, and he certainly did not realise the place that companies would occupy in the economic organisation of the future. During the year 1863–76, 10,462 companies were registered in England, many of which of course, either failed to materialise or failed to maintain their existence during the period, but, in 1885, the number of companies registered in England was 8,119 with a paid-up capital of £442 million; in 1905 the number was 35,204 with a paid-up capital of £1,752 million; and, in 1932, the number of public companies registered was 13,765 with a paid-up capital of £3,600 million. Besides the public companies in 1932, 97,400 private companies were registered in England, with a paid-up capital of £1,509 million, but probably the vast majority of these differed little, in fact, from the type of organisation which Bagehot commended in his day.

of combinations mainly concerned with the relations of capital and labour.

Whatever may have been the defects of the dominant political economy of the 1870's, accepting the problem of value as the central problem which political economy had to solve ; accepting as relevant to actual conditions the postulates of transferability of labour and capital ; accepting that rent formed no part of cost of production, and that the great majority of commodities were indefinitely reproducible at a constant cost, the long-period solution of the problem of value in accordance with cost of production did not appear unconvincing, especially when it was supplemented by the view that the values of monopolised commodities and those whose quantities could not be rapidly increased or decreased were subject to the forces of demand and supply. To do justice to those who systematised this analysis it must always be borne in mind that the analysis had reference to the highly mobile system of economic organisation which Bagehot described as existing in England ; that its time was when the country was undergoing rapid economic expansion ; and that the emphasis of the analysis was on long-period, as distinguished from immediate, or short-period results. Many of the doubts which had arisen in respect of this analysis were, at bottom, doubts concerning the relevance of long-period results to actuality, and it was certain that, as the above-mentioned changes proceeded, these doubts would find increasing justification. Moreover, in face of these changes, while, perhaps, the axiomatic character of the first part of Adam Smith's maxim would not be seriously questioned, it was certain that the second part, concerning the interest of producers, would tend to be regarded with less respect, and that the attitude of economists to the problem with which they are concerned would be influenced.

How this attitude was already being influenced was revealed when, after many years of preparation, Dr. Marshall published his *Principles of Economics* in 1890, and the direction and power of the influence can only be fully realised by passing directly from a reading of previous writings to a reading of the early editions of that classic work. It was not that Dr. Marshall concentrated on the interest of producers as opposed to the interest of consumers, it was that he realised that these interests were the interests of the same individuals, and in his work he so treated them. This attitude, in its implications, meant a large departure from the attitude of earlier economists, especially as regards the practical side of political economy. It was

the result of a wider social outlook, and while, in its implications, it might not have met with the full approval of Cairnes, it was not out of accord with his conception of political economy, and especially with his statement that the changing needs of an advancing society would evolve new problems for the economist and call forth new growths of economic doctrine.

It is not to the present purpose either to state or examine the strictly analytical side of political economy as Dr. Marshall presented it. It is more the purpose to mention that he had far too much wisdom to suppose that the analysis of his predecessors could be completely ignored. While he utilised to the full the marginal method of analysis, of which they[1] had shown only a faint recognition in their treatment of rent, his mind, like their minds, was ever fixed upon long-period results, in the recognition that it is only in the light of these results that a scientific understanding can be gained of the multitude of ever-changing heights which the economic system in its unceasing movement presents. At the same time he realised that only with a perfectly mobile economic organisation could the attained results correspond with long-period results. Consequently, in his analysis, attention was directed, to a far greater extent than ever before, to the immediate or short-period working of the organisation, but always with an underlying insistence on every aspect of this working being viewed in relation to its long-period results. At the present day, no doubt, pertinent criticism might be offered of certain parts of Dr. Marshall's analysis and some of these parts might be rejected altogether. Even as regards the terms long period and short period, which play so large a part in the analysis, much might be said in favour of their being discarded and of terms of equilibria only being used, on the ground that the latter are less misleading in their implications. However this may be, it is quite certain that, from the most practical point of view, the results which are described as long-period cannot be ignored with impunity, and it is even more certain that the conception for which the term "long period" stands cannot be ignored by any economist who desires political economy to be regarded as a branch of scientific study and not as a study whose object is to justify opportunist expedients for the attainment of opportunist ends.

By the beginning of the twentieth century the changes that were proceeding when Bagehot wrote had made economic organisation in England, especially the organisation of the large industries of

[1] I regard Jevons as more a contemporary than a predecessor of Marshall

the country, very different from what it was in 1876. His forecast of the expansion of international trade had been amply fulfilled; the main features of the existing economic organisation had been determined by the expansion, but the effect on the economic outlook was certainly not what he had anticipated. The revival of the protectionist controversy in the last quarter of the nineteenth century, and the powerful impulse it received in the first years of the twentieth century, were indicative of what lay ahead if sufficient obstacles were encountered in external markets, and more emphatically so if these obstacles were accompanied by serious external competition in the home market. With the consolidation of producer interests, which was one part of the changes that were proceeding, it would mean that while the first part of Adam Smith's maxim might still not be openly challenged, the second part might be relegated to a distant background. In a wider sense it would mean that the teaching which the nineteenth-century economists had regarded as the practical side of political economy would be violently assailed, and, what is of far more importance, there would be a danger that the theoretical structure of political economy might be strained to justify futile efforts to gain incompatible ends. Then came the catastrophe of war, and a strong but by no means indisputable case might be presented for the view that its effect on the economic position of this country, with the economic organisation it had come to possess, was simply to hasten the development of a situation which sooner or later would have had to be faced. Whether this view is correct or not the situation has appeared and with it the consequences just mentioned.

What then of the relevance of political economy to the situation and what of the attitude of economists to it? On the strictly analytical side there can be no question of the general relevance of political economy to the situation; no day passes without bearing witness to this fact. Nor can there be any doubt of the validity of the principles it enunciates, or that, if the principles were observed in practice, the tangled situation would unravel, and a greater and more general material prosperity become possible than ever before. What political economy cannot do is to devise means for the simultaneous attainments of incompatible ends, or give encouragement to beliefs that, somehow, between yesterday and to-day, exploded economic fallacies can have been transmuted into economic wisdom. As might be expected the situation has thrown up new problems which call for analysis, on the results of which, until the analysis

is complete, divergence of views is likely among the analysts themselves, but surely this is not something unique to political economy and economists.

The attitude of economists to the present situation involves the question of the desirability of the ends aimed at, and ultimately of the type of social and economic organisation which it is sought to attain. The attitude of the economist *qua* economist, one who at the same time has not to maintain a reputation as a publicist, will be determined by the view he takes of the function of political economy itself. Maybe he would state his attitude appropriately if he availed himself of the words of Cairnes previously quoted : " Political Economy is a science . . . it expounds the laws of the phenomena of wealth . . . it stands apart from all particular systems of social or industrial existence . . . it pronounces no judgment on the worthiness or desirableness of the ends aimed in such systems . . . it supplies the means, or more correctly a portion of the means for estimating all ; it refuses to identify itself with any." To quote these words, however, would not have to be taken to imply that this economist, as a member of the general community, with responsibilities to it, would have no views on which type of ends and which type of social or industrial existence are worth while striving for.

G. W. Daniels

AMERICAN RAW COTTON POLICY

THREE countries, the United States, Egypt and British India have supplied during the last seven years three-quarters of the world's production of cotton ; the United States alone has accounted for more than half. Three other countries, China, Russia, and Brazil, are also large producers but most of their production is used by their own domestic mill industries and does not enter to any large extent into international trade. The manufacturing industries of England, Japan and Europe which have to import the whole of the raw cotton they need, are dependent on the United States, Egypt and British India for the bulk of their raw material supplies. During recent years the Governments of Egypt and the United States have attempted to stabilise and raise cotton prices and to control and restrict cotton production with the intention of helping cotton growers in their own countries and without direct regard to any possible adverse effects their policies might have on the manufacturing industries of other countries.

In 1933, cotton growers in the United States were paid to reduce their acreage by 10 million acres and it is intended to secure a further reduction in 1934, down to 25 million acres, compared with 40 million acres planted in 1933. On the other hand, the Egyptian Government which intervened in the cotton market as early as 1921 has announced that it does not intend to intervene again, it is disposing of the whole of its stocks of cotton and the restrictions on cotton acreage in Egypt have been withdrawn. British India, the third of the principal cotton growing countries, has bargained for the increased use of Indian cotton in England as consideration for a preference granted to British cotton manufactures imported into India and at the same time has arranged an import quota for Japanese goods into India to vary with the amount of Indian raw cotton purchased by Japan. The policy of the Indian Government is towards an expansion of export of Indian cotton.

To some extent the fact that the three countries are pursuing different policies and particularly that the Egyptian and American Governments have adopted the same policy at different times suggests the possibility of playing one off against the other. But the extent to which this can be done is limited. Raw cotton is not one single commodity but rather a large number of different commodities

distinguished by technical qualities and uses. Each country produces cotton of particular kinds and varieties and only some of these may be directly substituted for those produced by another country.

A policy therefore, of crop restriction and price raising, adopted by one country of supply has the effect of upsetting the price relationship and the supply of various kinds of cotton and it is just these particular changes against which consumers cannot adequately protect themselves in the organised futures market. This study in American raw cotton policy is intended to give an account of the needs and arguments for the control of the marketing and production of American cotton supplies as they have been discussed for many years and have formed the basis for recent American legislation.

THE NEED FOR CONTROL

World cotton consumption was increasing before the war but was checked by the outbreak of hostilities in Europe. After the slump of 1921 consumption was, for some years, less than pre-war and it was not until 1924–25 that world consumption again reached and exceeded its pre-war amount. The next five years were a time of rapid expansion in the cotton manufacturing industries: world mill cotton consumption increased more than 20 per cent. between 1924 and 1929. Since 1929 consumption in most countries has fallen but since cotton is used mainly for clothing, the decline in the activity of cotton manufacturing industries has not been so severe as that in other manufacturing industries. The decline since 1929 has in fact been greatest in American mill cotton consumption for a larger proportion of the cotton is used in the United States for industrial needs than in other countries. In 1931 and 1932 world mill cotton consumption fell as low as 15 per cent. less than in 1929 but recovered in the second half of 1933 to about 5 per cent. below the level attained in 1929.

American cotton growers have thus mainly had the benefit of an expanding market. The largest single cotton manufacturing industry in the world is in the United States itself and 95 per cent. of the cotton used by that industry is American cotton. Outside the United States, mill consumption of American cotton has increased but has been falling during post-war years, relatively to the consumption of other growths. This relative decline has been due to some extent to the development of important mill industries in

British India, Russia, Brazil, and China, using mainly their own cotton supplies, but even in Great Britain and Northern Europe which do not grow raw cotton, the demand for American cotton has fallen relatively to other growths.

A loss of their share of world trade has not, however, been important so long as it did not mean an absolute decrease in exports. Their problem up to 1930 was largely one of regulation and control of the production and sale of American cotton ; since 1930 there has been added the problem of meeting serious depression in the United States and abroad.

In particular they have had to face (1) an increase in the capacity of the " Cotton Belt " due to the opening up of new cotton growing areas in Texas, Oklahoma and Arkansas, and along the Northern fringe of the Belt, (2) an excessive variation from season to season in the incomes of farmers, acreage and yields of cotton and (3) a substantial increase in the amount of cotton carried over from one season to another especially since 1930.

AMERICAN COTTON : SUPPLIES AND PRICES

TABLE I

Seasons ending July 31	Cotton Crop: Acres Harv'st'd (million acres)	Cotton Crop: Yield per acre (lbs. of lint)	Cotton Crop: Crop (million running bales)	Carry-over (million running bales)	Supply (million running bales)	Dec. price (cents per lb.)	Value of crop to Farmers[1] (million dollars)
1924–25	39·5	165	13·6	2·7	16·3	23·7	1561
1925–26	44·4	174	16·1	3·4	19·5	19·3	1577
1926–27	44·6	193	17·8	5·5	23·2	12·2	1121
1927–28	38·3	162	12·8	7·7	20·5	19·3	1308
1928–29	42·4	163	14·3	5·1	19·4	19·4	1302
1929–30	43·2	164	14·5	4·5	19·0	17·0	1245
1930–31	42·5	157	13·8	6·3	20·0	9·7	659
1931–32	38·7	212	16·6	8·9	25·5	6·1	484
1932–33	35·9	173	12·7	13·0	25·7	5·8	397

[1]Value of crop excludes income from cotton seed.

Cotton acreage harvested has been as high as 44·6 million acres. It was reduced in 1932 to 35·9 million acres but this was still larger than in 1913 or any pre-war year. The amount of land which could grow cotton in the United States is much greater than 44·6 million acres—up to the present the highest number of acres harvested—because farmers do not have all their land growing cotton but vary the cotton acreage according to the movement of cotton prices in relation to the prices to be obtained from alternative crops.

In 1929, almost two million farmers grew cotton or, excluding negro croppers on plantations, $1\frac{1}{2}$–$1\frac{3}{4}$ million. Cotton acreage on all farms amounted to 43·2 million. Lint cotton and cotton seed amounted to 40 per cent. or more of the total value of the saleable output of four-fifths of the farms ; for the remaining one-fifth the value of lint cotton and cotton seed produced was less than 40 per cent. The first group of farms—the four-fifths of the total—had 65 million acres on cotton and other crops and for all farms growing cotton it is safe to say they had at least one-third of their acreage on crops other than cotton. Some of this land may of course be unsuitable or undesirable to use for cotton production. But since these farmers have plenty of land at their disposal and necessarily have experience of cotton cultivation, an increase in cotton acreage in response to higher cotton prices, can be very quickly made even without new farms opening up.

On the other hand, cotton acreage is not reduced so quickly as a result of a relative decline in cotton prices. In the southern United States, cotton is the principal crop produced for sale and the best security on which the farmers can obtain mortgages and credit. If cotton acreage is to be reduced, some other crop which is a " cash " crop must be substituted or farmers must grow more of the kind of crops they can use themselves. Usually a decrease in cotton prices relatively to the prices of other crops is followed by a reduction of cotton acreage though the amount of the reduction depends also on the difference in yields of other crops on the same land and the amount of labour involved in their cultivation compared with cotton. Since 1930, while cotton prices have been low even in relation to the prices of other crops, farmers have been urged to grow a larger amount of the kind of produce they can use themselves or to try alternative crops. Propaganda for this purpose has been successful in helping to reduce cotton acreage—it fell from 42·5 in 1929 to 35·9 million acres in 1932—but in so far as a small shift from cotton growing is equivalent in acreage to a large shift into the cultivation of other smaller crops, these recommended alternative crops have in turn become less profitable and farmers have reverted to cotton growing.

But even if cotton acreage could be controlled absolutely, there would still be considerable variation in the yields per acre. After 1913 yields were sharply reduced by boll-weevil damage and during post-war years have generally been lower than before the war. Improved methods of controlling the boll-weevil and the expansion

of cotton growing in Oklahoma and Texas, where boll-weevil damage is less, are resulting in higher yields but yields are still less on the average than before the war. The chief factor in altering the yield from one season to another, however, is still the amount of moisture and weather conditions. In 1930–31, yield per acre was 157 lbs., but rose in the following season to 212 lbs. mainly due to better weather conditions. Lower yields have partly offset the increase in acreage since 1913 but the figures given in Table I. above show that variation in yield from one season to the next is still considerable.

To some extent yields per acre can be increased or decreased by fertilisation and similar methods but it is impossible to keep the annual variation in yields down to narrow limits. Thus a general agreement among cotton growers to restrict acreage by 10 per cent. may be almost nullified by 10 per cent. increase in yield per acre or again may be made even more stringent by a 10 per cent. decrease in yield per acre. In practice then, it is not possible to decide to increase or decrease production by an agreed amount without leaving a certain range of error. This must be recognised under any scheme of control.

THE CHARACTER OF STABILISATION

Since acreage and yields per acre change from one season to another there seems to be a *prima facie* case for some kind of control which will smooth out fluctuations of supply from one year to the next and lessen fluctuations of prices to the ultimate benefit of both growers and consumers.

This means regulation of the marketing of cotton. Most of the two million farmers sell their cotton soon after it has been picked and ginned in October, November, and December. They sell at prices which reflect the full effect of that season's supply and the demand for American cotton as anticipated at that time. If farmers could collectively regulate the rate of sale of their cotton over a longer period, they would lessen the fluctuations of prices during the season. Further if they could take part of one season's supply off the market during a time of large supplies and low prices and sell this excess of supply in a later season when supplies were not so plentiful, they would lessen the fluctuations of prices from one season to another. This suggestion for " stabilisation " as it is called, is based on the experience of past years when if it had been possible to deduct part of the supply in one season and add it to the supply of a later season, prices paid to farmers would have been higher in the one season

and lower in the other and variations in prices would have been smoothed out.

Stabilisation can, however, only reduce fluctuations of prices; it cannot raise the level of prices. Perhaps with more stable prices, cotton farmers may cease to grow cotton on the more costly lands which can only be profitable at prices obtained by short crops. But even if cotton prices were kept stable, incomes of farmers would still change from year to year, and it is not certain they would change less than they do without attempting price stabilisation. Ideally, stabilisation of incomes of farmers is sought. This means some variation in prices and supplies. In practice, stabilisation of prices is partly possible; and stabilisation as usually understood implies the regulation of sales of cotton during the season for farmers by co-operative and similar associations acting in the interests of farmers, and the holding and transferring of stocks from one season to another by co-operatives or special "stabilisation corporations" to prevent extremely low prices.

But it is one thing to point to the records of production, supplies and prices during recent seasons and to show that low prices in a certain season could have been avoided if some of the supplies in that season had been transferred to the following season. It is another to have to decide at a particular time knowing nothing of the future, except on the basis of past experience, whether the time is opportune to begin stabilisation operations. It is usually urged to begin only when large supplies are already on the market and prices are low and not in the more favourable circumstances when there are short supplies and prices are high.

If, for example, 3 million bales are taken off the market, what chance is there of selling them later at a price sufficiently high to cover the additional cost of storing this stock for a year? What is the likelihood of the large crop being followed by a small crop next season? Is it not possible that the rise in prices due to taking 3 million bales off the market may encourage farmers to keep up instead of to reduce production? What rise in prices is likely to result from taking 3 million bales off the market? Will storing of cotton by a "stabilisation corporation" reduce the holdings of stocks by private individuals? If 3 million bales are insufficient to raise prices appreciably, how much cotton should be taken off the market to raise prices, by an agreed amount, say, from 8 to 10 cents?

The answers to these questions must be known approximately before stabilisation is tried in practice. It is not sufficient to speak

in general terms about the character of supply and demand; the relation between changes in supplies and changes in cotton prices must be known more precisely.

THE THEORY OF STABILISATION

For the years 1906–33, omitting 1914–18, the relation between December prices of American middling cotton, world supply of American cotton for the season and the American Bureau of Labour wholesale price index number for December is given approximately by the following equation derived by multiple correlation.

$$\log X_1 = 1{\cdot}7234 \log X_2 - 1{\cdot}4154 \log X_3 - {\cdot}1885$$

X_1 is the December price of American cotton in cents per lb.; X_2 is the December wholesale price index number (1926=100); and X_3 is the supply of cotton in million running bales for the season. Assuming a certain level of wholesale prices, a direct relation is obtained between supply and prices of cotton.

The general experience of the 21 seasons summarised by the equation shows that the price of cotton goes down as supply increases and it shows also—what is not so obvious—that as the amount of supply increases, the gross value of the supply decreases. If the supply of cotton increases from 15 to 20 million bales, cotton prices fall and the value of a supply of 20 million bales is less than the value of 15 million bales. It is possible, of course, that supplies of cotton could be so much smaller than usual that they would have less value than any yet sold.

Now the general relation between supply and prices is not necessarily the same as the relation between crops and prices. If cotton was perishable and could not be stored from one season to another, the annual crop would be the annual supply and the relation would be the same. But since cotton can be kept for some years without serious deterioration, a varying proportion of the annual supply is made up of cotton carried over from previous seasons. Thus, in two seasons, the crop may be the same at 15 million bales but if in the first season the addition to supply through carryover is 1 million bales and in the second, 5 million bales, then a 15 million bale crop will sell for less in the second than in the first season. The effect on prices will differ to some extent on where and in whose hands the stocks are held but broadly the relation between supplies and prices becomes less reliable as a guide to the relation between crops and prices as the proportion of carryover to total supply increases. In fact, when the carryover is already large and cotton prices must be

low on that account, an increase in the size of the crop may give an increase in the value of the crop.

The removal of, say, 3 million bales from the market will raise prices ; the larger the proportion 3 million bales is to the total supply, the bigger will be the rise in prices. In opposite circumstances, the addition of 3 million bales to the supply will decrease prices ; the less the proportion 3 million bales is to the total supply, the less will be the fall in prices. Further, the character of the relation between supply and prices is such that the removal of 3 million bales from the market in a season when supplies are relatively short will add more to the value of the supply than the addition of 3 million bales to the market when supplies are relatively large will subtract from the value of the supply. In so far as the annual crops are usually a larger proportion of a relatively short supply and a smaller proportion of a relatively large supply, this is also true of the effect on the value of annual crops.

Apparently then, the way to increase the value of supply and probably the gross income of cotton growers is to make short supplies still shorter and large supplies still larger—that is, to increase the fluctuations in supplies and prices from season to season by the transfer of stocks from one to the other. The losses which an association engaged in this work would necessarily incur would need to be borne collectively by cotton growers. But if cotton growers forego the possibility of increasing their incomes and attempt to stabilise the value of supply and thereby achieve some stability in their incomes perhaps on a lower average level, the association they entrust with the work of stabilisation should adopt the opposite policy of buying up stocks when supplies are large and selling them when supplies are small. Cotton prices would still need to change from season to season for this policy to be successful but their fluctuations would be reduced.

Now these arguments based on the curve fitted to the figures of cotton supplies and prices are not true if the type of equation used is shown to be unsuitable. There is no theoretical basis for preferring one type of equation rather than any other and the validity of the choice of equation is that it fits the figures as a whole at least as well as any other type of equation. For the present purpose, another reason for determining the relation between cotton supplies, prices and wholesale prices by multiple correlation is that this method was most frequently used in the preliminary analytical work on stabilisation in the United States before it was tried out in practice.

But too much reliance cannot be placed upon the equation or in the arguments based upon it; they are suggestive and not conclusive. The same amount of supply will sell at higher or lower prices in different seasons according to whether—to name two important reasons—demand has risen or fallen or production of competing growths has decreased or increased. Such changes will affect the success of stabilisation operations when cotton is bought in one season and has to be sold in a later season when conditions both of demand and of supply have changed.

So far stabilisation has been discussed without any reference to its possible effect in raising or lowering the prices of different kinds of cotton unequally. For example, if 3 million bales are to be withdrawn from a total supply of 20 million bales in a particular season, consumers of cotton may rightly urge that the kinds of cotton to make up the 3 million bales should be chosen in such a way as to maintain the usual relation between the prices of different kinds of cotton and should not be taken indiscriminately from the total supply. Cotton growers may urge on their part that the 3 million bales should be chosen in such a way as to secure the greatest possible support to the prices of the principal kinds of cotton they sell. How reasonable these proposals are depend on how far an excess of supply in one particular kind of cotton depresses only the price of that kind of cotton and the extent to which this is diffused over the prices of other kinds. An excess of supply of, say, $\frac{3}{8}$ in. staple is not so important since the demand for $\frac{3}{8}$ in. cotton is limited and the extent to which it could be substituted for $\frac{7}{8}$ or 1 in. cotton, even if $\frac{3}{8}$ in. cotton became extremely cheap relatively to other staple lengths, is restricted. On the other hand, an excess of supply of $1\frac{1}{4}$ in. staple cotton would be more serious since it is technically possible to use long instead of short staple while the reverse is less true.

STABILISATION IN PRACTICE

The first attempt at stabilisation in practice began in 1929. The Agricultural Marketing Act was passed on June 15th, 1929, and the Federal Farm Board was created to give effect to the policy contained in the Act. The Board was to "aid in preventing and controlling surpluses through orderly production and distribution so as to maintain advantageous domestic markets and prevent such surpluses from causing undue and excessive fluctuations or depressions in prices."

In passing this Act, the American Government clearly looked to the development of co-operative associations among cotton growers

as the most effective means of regulating the marketing of cotton and reducing price fluctuations. During the five years previous to 1929 the existing co-operatives had handled less than 10 per cent. of the annual cotton crops and their membership was only about 90,000 out of more than $1\frac{3}{4}$ million cotton growers. The first and immediate task of the Farm Board was therefore to strengthen these co-operatives and to co-ordinate their activities. During the summer of 1929 the associations in Tennessee, Arkansas, and Missouri were assisted to amalgamate into a Mid-South Co-operative Association and all the State and the regional associations, except the Staple Co-operative Association, whose members were almost all growers of long staple cotton, were joined into a central selling organisation called the American Cotton Co-operative Association. Although this Association did not come officially into being until January, 1930, the preliminary work of the Board in strengthening the co-operatives was almost completed by October, 1929.

In the meantime events had begun to move quickly. The carry-over at the end of the 1928–29 season had not been excessive and prices at the beginning of August, 1929, ranged round $18\frac{1}{2}$ cents per lb. for spot middling cotton. In the following 10 days prices declined 1 cent per lb. under the influence of the official crop forecast which was much larger than expected. On August 19th, the Farm Board agreed to make loans to co-operatives amounting to 25 per cent. of the sale price of cotton on which a definite price had been fixed by sale or hedging. On September 5th loans were also granted of 10 per cent. of the market price on cotton for which a definite price had not been fixed. These loans were supplementary to the ordinary loans of 65 per cent. of the sale or market price which could be obtained from Federal intermediate credit banks.

The financial support of the Board was, however, insufficient to prevent weakness in cotton prices and spot middling went down to about 17 cents per lb. in the first two weeks of October. On October 21st, the Farm Board made the decision which was the most important it ever made during its existence of four years and on which the future policy of the Board was to be largely determined. What this decision was is best stated in the press release of the Board on that day.

> "The Federal Farm Board believes that the present prevailing prices for cotton are too low. The total supply of American cotton is less than last year, consumption continues at a world rate equal to that of last year, unfilled orders and actual sales of cotton goods are more and stocks are smaller than last year, yet the price of the raw cotton is less. The Board believes that this unsatisfactory price level is chiefly due to the good

autumn weather which, in most of the Southern States, has led to the exceptionally rapid marketing by producers in amounts much greater than the markets of the world can temporarily absorb. This, in turn, has led to lack of confidence in cotton values."

"The Board believes that the remedy is more orderly marketing. In order to assist cotton farmers to hold back their crop and at the same time have money with which to pay their obligations, the Board proposes to lend to cotton co-operatives sums sufficient to bring the total amount borrowed from all sources by such associations to 16 cents per lb. for middling cotton."

This did not mean that the Board would advance 16 cents on each lb. of cotton to any farmer who applied. Co-operatives could mortgage cotton with Federal or private banks and could secure loans supplementary to these from the Federal Farm Board in amounts sufficient to make the average total loan, with certain allowances, up to 16 cents per lb.

It is easy to see years afterwards why this decision was unfortunate ; it is more difficult to suggest what other decision could have been made in October, 1929, amid the tremendous optimism of the 1929 boom if a decision of such a character had to be taken. It is possible to deride the meagre statistical evidence given of a probable continuance of cotton consumption at the high level of 1928–29. But if the Farm Board was to help to keep up cotton prices during the 1929 season, it had to intervene in the market in October, since farmers sell their cotton from October to January and further even if the Board had been sufficiently capable to forecast the slump of 1930, it could hardly have anticipated how far prices would eventually fall.

On the date of the announcement, 16 cents was about 92½ per cent. of the market price. The decline in cotton prices was checked and for a time it looked as if the Farm Board was right. Throughout November and December when farmers were selling the 1929 crop, prices kept up between 16½ to 17 cents. There seems no doubt that the loans which the Farm Board made to the co-operatives did help all American cotton growers whether members of co-operatives or not, to obtain higher prices for their 1929 crop than they would otherwise have received.

Eventually in January, 1930, along with the decline in business activity, exports and commodity prices, cotton fell lower than 16 cents per lb. On March 10th, it was less than 14 cents. The co-operatives were unable to sell cotton at prices sufficient to repay the loans they had got from the Farm Board. With the approval of the Board they continued to sell cotton. To effect these sales and yet to

maintain their position for the security of the Board, the co-operatives replaced any cotton they sold by buying futures.

The Farm Board was also obliged to come to the help of the co-operatives on futures contracts which they had entered into on their own account. Earlier in the season the co-operatives had sold some of their own stocks of cotton and hoping that prices would rise later, they had bought futures against the cotton they sold. In accordance with the rules of the futures market they had been called upon to pre-pay part of the purchase price of these contracts as cotton prices fell. The fall of cotton prices at the end of January was, however, so great that a number of the co-operatives could not raise enough money to make further pre-payments. The purchases of these futures had been made by the co-operatives on their own account and the Farm Board had really nothing to do with them except in so far as the co-operatives had become the recognised organisations through which the Board was attempting stabilisation. The Board could not permit the failure of the co-operatives and money was found to continue the pre-payments and to take up the futures.

Now most of the futures the co-operatives had bought both on their own account and those also with the approval of the Board, were for delivery in May, June, and July, and it became known in March and April that they intended to take up cotton when these contracts matured. The result was to squeeze prices up to almost 16 cents again though there was no corresponding stimulating effect on prices of cotton for delivery later than July.

A permanent recovery in prices was now out of the question for the present. The sharp rise in April and May was wholly due to the squeeze on the futures market. The Farm Board therefore decided in June to take over the stocks of cotton held by the co-operatives and to put them under the control of a new organisation, the Cotton Stabilisation Corporation. The Stabilisation Corporation was incorporated on June 5th, 1930, and at the end of the month purchased from the co-operatives their stocks of 1,241,509 bales, at the average price of 16·4 cents per lb. The purchase price was considerably higher than the market price at that time and was the price at which the cotton had stood in the books of the co-operatives. In addition the Staple Cotton Co-operative Association held 77,467 bales of spot cotton and futures contracts. This cotton was not taken over by the Stabilisation Corporation. A total of 1,319,076 bales was in the hands of these two organisations on June 30th, 1930.

Prospects for the 1930 crop which was now maturing were not very bright so far as the Farm Board was concerned. It had been hoped to secure a substantial reduction in acreage but the actual decrease was disappointingly small. Cotton prices at the beginning of the new season ranged round 12 cents per lb. compared with 18½ cents a year before, but when the first official forecast of acreage was made known, prices dropped nearly to 10 cents. The Farm Board with 1929's disastrous experience still fresh in its mind did not attempt to commit itself to any definite price at which cotton should be, but it announced on August 25th, 1930, that it would assist co-operative associations to advance to growers 90 per cent. of the value of "seasonal pool" cotton, that is, cotton delivered to a co-operative and paid for by an immediate cash advance and by a further settlement later based on the average price for the season. Advances of 80 per cent. of the present value of cotton would also be made on "option pool" cotton delivered to co-operatives where the grower reserved the right to fix the price of his cotton at his own discretion.

In granting those loans the intention of the Board seems to have been that with liberal credits the co-operatives could compete more effectively with ordinary commercial firms in buying cotton from farmers and this competition would help farmers generally to obtain a higher price for cotton. The Board agreed to carry these loans, if necessary, for a period of three years from July 31st, 1930.

Whatever the intention of the Board may have been, the effect of their action was that farmers who had not hitherto been members hastily took up membership of co-operatives in order to take advantage of the liberal credits which the co-operatives could allow. More than 2 million bales were sold of the 1930 crop to the co-operatives. As prices continued to fall, however, the co-operatives found themselves again in the bad position of 1929. If they sold their cotton, they could not get prices high enough to pay back the loans from the Form Board. They began to pile up stocks of unsold cotton.

In an attempt to lessen the pressure on the market and in the hope that prices would rise, it was announced on September 23rd, 1930, that the holdings of the Stabilisation Corporation would be maintained throughout the season up to July 31st, 1931. In conformity with this announcement, the net holdings were not decreased during the season 1930–31. From time to time sales were made from stabilisation stocks but were replaced. An addition of 78,300 bales was made in December, 1930, and the stock owned by the Corporation was 1,310,789 bales in July, 1931.

This withdrawal of stabilisation stocks from the market until the 1931–32 season did not have any noticeable effect on prices which still continued to fall. In the meantime the stocks of the co-operatives increased to over 2 million bales by December, 1930. The combined holdings of the Stabilisation Corporation and the co-operatives were therefore 3½ million bales in December, 1930. Prices were then about 9 cents compared with 12 cents at the beginning of the season.

These stocks were kept almost unchanged until the end of the season but as prices fell the Farm Board was called upon to provide further loans to finance the holding of these stocks. The original Stabilisation Corporation cotton had been bought at prices over 16 cents per lb. and the market price was now below 9 cents. The Stabilisation Corporation and the co-operatives only held second mortgages on the cotton in their possession. As prices fell, the Farm Board had to assume an increasing share of the purchase price, paying off primary loans held by Federal and private banks in order to prevent the stocks of cotton being sold. Moreover as long as the stocks continued unsold, storage, insurance, and other charges had to be paid.

The purchase of the 1930 cotton crop for stabilisation purposes by the Stabilisation Corporation and by the co-operatives were the last made with the approval of the Farm Board. From now onwards no further purchases were made and the Board began to consider ways and means of disposing of these holdings with the least possible loss. The 1931 crop was exceptionally large and prices went down to less than 6 cents in October, 1931. To help farmers to sell their cotton at higher prices the Board decided not to attempt to sell any of its stocks for the time being and successfully concluded an agreement with a number of Southern Banks to keep between them 7 million bales off the market for the rest of the 1931–32 season. On October 12th, 1931, the Board agreed to maintain the holding of 1,300,000 bales by the Stabilisation Corporation and to finance the 2,100,000 bales held by co-operatives until July 31st, 1932. The Southern Banks on their part agreed to finance the holding of a further 3,500,000 bales for the same period. 400,000 bales which the Department of Agriculture had accepted as collateral for seed loans were also to be withheld.

The first step towards liquidation of stocks of cotton was made in May, 1932, when the Board decided that it would sell up to 650,000 bales of the stocks of the Stabilisation Corporation during the following 1932-33 season but at the same time it would keep the stocks of

the 1930 crop in the possession of the co-operatives unsold for another season unless cotton prices went up to about 13 cents. During July, 1932, the co-operatives sold some of their stocks and at the beginning of the new season their stocks of the 1929 and 1930 crops were 1,825,200 bales. In addition, by order of the American Government, 500,000 bales of cotton were given from the Stabilisation Corporation stocks to the charitable organisation, the American Red Cross, to be manufactured into clothing for relief purposes.

Sales of cotton out of Stabilisation Corporation stocks began in August, 1932, and taking advantage of the rise in prices at the beginning of the season more than 300,000 bales were sold. On September 5th, however, further sales were stopped. The reason given for this was that as prices were rising, the Board did not wish to spoil the market for the new crop which was coming forward. It seems likely, however, that the Board in its new rôle as a seller of cotton was not so beloved of farmers as it had been as a buyer of cotton. The Stabilisation Corporation was not to continue until March, 1933, with the sale of remaining bales out of the 650,000 bales it had been previously decided to sell during the season. These stocks were in fact never sold on the open market, for following a further order from the American Government, and much against the wishes of the Board, all the remaining stocks were handed to the American Red Cross. The stocks of the 1930 crop held by the co-operatives were to remain unsold until July, 1933, though any stocks of the 1929 crop still remaining could be sold.

In March, 1933, the Roosevelt Administration came into office and the Federal Farm Board later was replaced by the Agricultural Adjustment Administration and the Farm Credit Administration. At the beginning of March, the stocks of cotton still unsold in the possession of the co-operatives, including the Staple Cotton Co-operative Association, were 1,567,420 bales. In addition the Department of Agriculture had 725,000 bales as collateral against seed loans. All the Stabilisation Corporation's holdings had been disposed of except 28,875 bales sold but not delivered. The American Red Cross had 548,643 bales. The stocks of the co-operatives and the Department of Agriculture were later taken over by the Agricultural Adjustment Administration.

THE FAILURE OF STABILISATION

How much this experiment in stabilisation finally cost the American Government it is impossible to state. One official figure is

157 million dollars but this can only be an estimate since a large proportion of the cotton was never sold in the open market. Some of the loss could have been avoided if stabilisation operations had been abandoned earlier. On the other hand, against this estimated loss there should be set an increase in incomes of farmers, especially during the 1929–30 season.

All the practical difficulties of stabilisation were clearly shown in the experiences of the Farm Board. The Board was unfortunate in having to start just before the 1929 crisis and it never really succeeded in extricating itself from the difficulties it got into during the first few months of its existence. The severe tests put to the Board left no doubt as to the lessons to be drawn from its experience.

Briefly there were these—(1) While stabilisation implies trying to keep up prices when supplies are large or demand has fallen by taking some of the supplies off the market, it also implies lowering prices when supplies are short or demand rises. Stocks of cotton bought must later be sold. When, however, the time comes for these stocks to be sold, there is usually an outcry that the sale of these stocks will depress prices. Of course they will, for that is what stabilisation should do. But the experience of the Board shows that the selling part of stabilisation operations was least popular with those whose long period interests it tried to help.

(2) Ideally, the costs of stabilisation should be paid by all farmers who benefit from stabilisation. In practice, this is almost impossible. In the United States, only a minority of the farmers were members of co-operatives and they could not be expected to bear the whole cost of stabilisation operations intended to help all farmers. On the other hand, if farmers do not pay these costs themselves, they become in effect a subsidy to agriculture and have to be discussed and defended as such.

(3) The stabilisation operations of the Farm Board showed that cotton prices could not be sustained by purchases and sales of spot cotton alone, but that some support must be also given by purchases and sales of cotton futures. If cotton is bought and sold at infrequent intervals in the spot market and not in the futures market, spot prices are thrown out of line with futures prices at those times. Again, if cotton futures are bought or sold for certain months and not for others, then futures prices are thrown out of relation to one another. Purchases and sales of spot cotton and futures must therefore be continuous and completed gradually. Otherwise, the usefulness of the organised futures market for legitimate trade hedging is seriously impaired.

(4) The experience of the Farm Board destroyed some of the implicit beliefs in what can be done in the direction of price forecasting. A mathematical relationship established between supplies and prices—no matter how carefully ascertained and shown to be adequate by test of significance—is never meant to be an infallible guide to what prices will be when supplies are altered. A general relationship between cotton supplies and prices based on the experience of years when demand was increasing, wholesale prices were steady and supplies were not excessive was little use in 1930–33, when demand was decreasing, wholesale prices were falling rapidly and supplies reached record high figures.

(5) The *prima facie* case for stabilisation rests on the variations in supplies and prices from season to season, and on the likelihood that a season of large supplies and low prices will be followed a year later or two years later by a season of small supplies and high prices. But the likelihood may not be so certain when stabilisation is attempted since the higher prices obtained by the withdrawal of the part of the supplies in a season of large supplies may reduce the inclination of farmers to curtail production in the following seasons and some reduction is necessary if the scheme is to be successful.

For the Farm Board to be successful it was essential that cotton growers should reduce their production after 1930 to allow the Board to sell its stocks of cotton without loss. In 1931, the Board urged farmers to plough up every third row of cotton planted and in 1932 efforts were again made to secure a substantial reduction in the crop but with little success. The act of purchasing supplies and maintaining prices in 1929 and 1930 tended to encourage farmers to keep up production and thus to continue the very situation stabilisation operations were intended to relieve.

The Federal Farm Board was established in 1929 to "aid in controlling and preventing surpluses from causing undue and excessive fluctuations or depressions in cotton prices." After 1929 demand for American cotton declined; the reduction of cotton production was insufficient even to meet this decline; stocks which were heavy at the end of 1929–30 season were further increased and in June, 1933, when a new crop of 16 million bales was maturing, the anticipated carryover was equivalent to a year's consumption of American cotton. A policy of stabilisation could not cope with such a situation; almost inevitably a policy of stabilisation led to a policy of restriction of production.

THE DEMAND FOR PRICE RAISING

Although the Agricultural Marketing Act of 1929 was passed principally to permit stabilisation operations, the general declaration of policy stated one of the two purposes of the Act to be, to place agriculture on a basis of economic equality with other industries. It was stressed that American agriculture was not getting its full share of the prosperity of the country and in particular that prices of farm products were too low in relation to prices of industrial products. These statements began to be heard more often as the Farm Board failed to stop the downward movement of cotton prices, and the prices farmers were getting for their cotton fell more quickly than the retail prices of the goods farmers had to buy. The losses of the Farm Board were defended as necessary contributions to the relief of agriculture ; the Farm Board was declared to have failed because its powers had been too restricted ; what was wanted was the extension of the powers of the Board to control production and to raise prices of agricultural products in relation to industrial products.

Moreover, with the fall in prices, especially since 1929, the incidence of fixed interest mortgage charges had become heavier. Either a general reduction of these charges by liquidation of mortgages or by reduction in the rates of interest was needed, or, alternatively, a raising of cotton prices to enable these charges to be paid. The poorer and also the better classes of farmers had suffered foreclosure for their inability to continue paying mortgage charges. The poorer farmers were the first to default as prices fell and many were foreclosed, but, with the parallel fall in land values, banks and real estate companies—in the hope of a later recovery in prices and land values—often delayed foreclosure, especially when the present value of the property of the distressed farmer was sufficient to repay only a small proportion of the original loan. On the other hand, they were more ready to foreclose the better class of farmers whose mortgages were usually lower since in those cases they could recover the whole or the greater part of the original loan.

THE AGRICULTURAL ADJUSTMENT ACT, 1933

The Agricultural Adjustment Act was passed in May, 1933. The Act stated that " since the present acute economic emergency is in fact the consequence of a severe and increasing disparity between the prices of agricultural and other commodities, it shall be

the policy of the Government to establish and maintain such balance between the production and consumption of agricultural commodities and such marketing conditions therefore, as will re-establish prices to farmers at a level which will give agricultural commodities, a purchasing power, with respect to articles that farmers buy, equivalent to the purchasing power of agricultural commodities in the pre-war period, August, 1909—July, 1914."

CHANGES IN PRICES OF COTTON AND FARM PRODUCTS AND IN PRICES OF GOODS BOUGHT BY FARMERS.

TABLE II

Year	Wholesale Prices of Farm Products (1910–14=100)	Actual Price of Cotton to Farmers Cents per lb.	Prices of Goods bought by Farmers (1910–14=100)
1910–14	100·0	11·9	100·0
1924	140·3	26·8	154·0
1925	154·0	22·2	158·9
1926	140·3	15·1	156·1
1927	139·4	15·9	154·0
1928	148·5	18·6	155·6
1929	147·1	17·7	154·8
1930	123·8	12·4	146·3
1931	90·9	7·6	126·2
1932	67·7	—	—

Using the figures given above which are on a slightly different base than that stated in the Act, the price of cotton received by farmers in 1931 was 7·6 cents per lb.; according to the principle laid down in the Act, it ought to have been 11·9 cents, multiplied by 126·2 and divided by 100·0, that is, 15·0 cents per lb. or 6·4 cents higher. In July, 1933, cotton prices were 4·2 cents too low and had to be raised by that amount. The method adopted of doing this was to put a processing tax of 4·2 cents per lb. on all cotton irrespective of grade or staple used by spinners in the United States, from the beginning of August, 1933. A flat tax of this kind tends to bear more heavily on consumers of coarser than on finer cotton goods and cannot be justified from fairness to different consumers but it is relatively easy to enforce.

According to the general principle of the Act, the processing tax should be paid on all American cotton consumed in the United States and abroad. Since usually about half of the cotton grown in the United States is exported, the yield of a tax levied only on cotton going into domestic manufacture will give only half of the money needed to recompense farmers for selling their cotton at prices less than they ought to be. Spinners in the United States can hardly

escape payment of the processing tax since the heavy duties on imported cotton restricts them almost completely to the use of American cotton, but there are no such restrictions on what foreign spinners can buy. If an export tax is put on American cotton, foreign spinners will use other growths of cotton instead of American ; the reduced demand will lower American cotton prices and a higher processing tax will be needed to attain parity with the price of goods farmers have to buy. Moreover, a higher cash income for cotton farmers obtained by re-distributing the yield of a processing tax will encourage farmers to keep up and perhaps increase cotton production. Effective control of production must be secured otherwise farmers might increase their acreage, prices would fall and a higher processing tax would have to be levied. It was decided not to tax cotton when exported, to make only spinners in the United States pay the processing tax, and to use the proceeds of the tax to restrict cotton production. Supplies of cotton would be reduced and this would lead to a general rise in the prices of American cotton, both in the United States and abroad.

The first step then was to restrict production. The Agricultural Adjustment Administration was empowered to enter into contracts with individual farmers. In return for reducing their acreage growing cotton by 25 to 40 per cent. below what it was in 1932, farmers were paid a certain amount of money, varying according to the number of acres withdrawn from cultivation and the normal yield of the land. These payments were either (1) a cash payment together with an option to buy at 6 cents per lb. as many bales of Government owned cotton as the acreage withdrawn from cultivation would normally yield, or (2) a higher cash payment without an option.

AGRICULTURAL ADJUSTMENT ADMINISTRATION : CASH PAYMENTS TO COTTON GROWERS

TABLE III

Yield per Acre.	With Cotton Option.	Without Cotton Option.
lbs.	dollars per acre.	dollars per acre.
100—124	6	7
125—149	7	9
150—174	8	11
175—224	10	14
225—274	11	17
275 and over	12	20

The option given was on cotton transferred to the Agricultural Adjustment Administration after the liquidation of the Federal Farm Board. The normal yield per acre was assumed to be the average yield of the five previous years so far as that could be ascertained.

About one million farmers agreed to reduce acreage. 10 million acres were withdrawn from cultivation and the cotton crop in 1933 instead of being over 16 million bales was kept down to 12·6 million bales; that is, almost the same as it had been in 1932. The result was disappointing, in so far as it brought no great reduction in the excessive supply of American cotton and it was evident that even more drastic restrictions would have to be tried in 1934, either by a compulsory curtailment of the acreage planted or by limitation of the amount of cotton to be ginned. At the time of writing it is not certain what further restrictions on production will be imposed.

REACTIONS TO AMERICAN POLICY

Present American policy for helping cotton growers has been developed out of the discussions of the last twelve years to improve conditions in American agriculture. It is possible to argue that its present form differs perhaps only in methods and emphasis from what it was five years ago. The drastic restrictions of production in 1933 and in 1934 have become necessary in view of the failure of the Farm Board's stabilisation experiments.

Consumers of American cotton, especially those outside the United States, have been frankly puzzled by American policy. But it should be remembered that in their view cotton is usually considered as the raw material for a manufacturing industry and not as in the view of the Farm Board and its successor, the Agricultural Adjustment Administration, an agricultural product and an alternative crop to corn, wheat, and potatoes. It is true that relatively little attempt has been made to interpret the difficulties of the American cotton growers to the depression in the manufacturing industries of England and Europe and to recent changes in international trade in cotton manufactures. A transference of export trade from England to Japan means a change in the re-distribution of American exports and also perhaps the substitution of one consumer for another whose demand for American cotton is more elastic to changes in American prices.

Since American cotton growers are dependent on export trade for the sale of half their production, attempts to raise American cotton prices abroad are likely to result in increased competition and to the substitution of other growths unless some kind of international agreement among the raw cotton producing countries is possible. Tariffs and other obstacles to international trade will perhaps never be so restrictive to the trade in raw cotton as they have become in world trade in manufactured goods but many factors tend to make the mill industries which are developing in many countries of the world use their own domestic cotton and thus to limit the purchases of American cotton. If American cotton growers intend to keep their export trade in raw cotton they should consider along with price raising schemes any opportunities which will make the present level of cotton prices more profitable to themselves.

January, 1934 H. CAMPION

AN ASPECT OF THE PROBLEM OF UNEMPLOYMENT

LET us imagine an enclosed economic system so situated that a certain proportion of the working population is unemployed. The remainder, we will suppose, is employed at a money and real wage per head that is deemed acceptable in the circumstances ; this wage being at the same time at a level below which the unemployed are unwilling to work. What forces can be operative to prevent the unemployed being taken into employment ?

Prima facie, if one-fifth of the workers are unemployed and four-fifths employed, it appears that the enlargement of employment could come about merely by making the economic organisation of the one-fifth a facsimile of that of the four-fifths. If all workers are of equal industrial quality and are prepared to work for the same money wage, then employment should be enlarged by taking into employment the minority that is unemployed under exactly the same conditions that provide employment for the majority. It is easy to see that certain conditions will break down the presumption of the accuracy of this conclusion. The one-fifth may not be of the same industrial quality—they may, for example, be able only to produce goods which the employed or themselves will not take at any price. In such circumstances, their employment is virtually impossible for it would necessitate a subsidy greater than the increase in the aggregate wage bill. Again, having an industrial quality less than that of the employed—yet at the same time having an economic efficiency greater than zero—employment of the minority is at first sight impossible at the same wage rate as that paid to the originally employed : employment in fact will only be possible in the presence of certain rather unusual conditions. Neglecting altogether other circumstances, their equi-proportionate employment in the same occupations and industries as the employed will necessitate differences between the wage rates paid to the employed and the previously unemployed ; or differences between the profits (interest or rents) obtained from the employment of the more and less efficient ; or differences between the prices of goods produced by the two classes of workers ; or, failing the presence of any of the preceding conditions, differences between the economic

efficiency of the processes of production in which the employed and previously unemployed are engaged. In general, therefore, it may be said that this circumstance will be sufficient to explain unemployment unless other factors of production are willing to accept less remuneration when employing the previously unemployed.

Assuming, however, equality of industrial quality in workers, can other conditions obtain to make the *prima facie* conclusion valueless? A certain proportion of the workers can be maintained in employment at a given wage rate which is an index of the real income that wage earners enjoy. To employ the same workers at the same wage rate to obtain the same real income would necessitate an increase in the amount of capital proportionate to the increase in employment. If it proves impossible to provide and maintain the proportionate increase in capital at the same proportionate cost in terms of output, permanent employment for the remaining workers cannot be obtained at the given money wage rate, unless a decrease in the real value of income takes place. The position of equilibrium desired under conditions of full employment is one in which output is increased proportionately to the increase in capital and employment, with the increased output divided among the factors of production in the same proportions as in the old position. With certain assumptions regarding the expenditure of the national income and the supply of natural factors this new position is quite definitive.[1]

In order to bring a certain amount of reality to this problem, it is desirable to make the assumption that in the original position the capital of the community is being increased, *i.e.*, that not only is a proportion of the factors of production of the community engaged in maintaining its capital equipment but also that a further proportion, paid out of the savings of the community, is engaged in adding to equipment and the capitalistic processes of production. *Prima facie*, a willingness to add to capital through a process of saving and investment is evidence of the likelihood of the automatic solution of the problem of unemployment. As capital is needed to set to work the unemployed and as the community is showing its willingness to provide this capital, it would appear that re-employment should take place in proportion as the capital of the system is increased. If then, we are assuming that unemployment is taking a permanent form it is obviously necessary to introduce a further assumption

[1] I am assuming throughout that there is a sufficient supply of natural factors to obviate recourse to less efficient use of these factors.

that will reconcile these two apparently contradictory hypotheses.

If we are assuming that equilibrium is obtained with four-fifths of the workers employed at a given money wage in producing output sold at a given price level and aided by new increments of capital provided by saving remunerated at a given rate of interest, it is evident what the nature of the further assumption must be. If capital is increasing at a constant rate without any alteration in employment and without any alteration in the rate of interest, technological or other changes must be taking place at such a rate that the additional capital is employable at a given remuneration. For example, let us assume that the annual interest charge on $£y$ is equal to $£x$, *i.e.*, that the interest rate is $\frac{100x}{y}$ per cent. If $£x$ is the annual wage of a worker and $£zy$ the new savings of society, we are therefore assuming that technical changes are taking place so that new processes are being introduced by which $£zy$ capital is able to produce the output previously produced by z men and their original proportionate capital equipment, when the original capital plus the added $£zy$ units of capital are operated by a constant number of workers, and that a value equal to $£x$ cannot be obtained by employing an additional worker. In this case the value of additional goods produced is equal to $£zx$, both at the price level occurring before investment and at that ruling after investment, and this value will be equal to the interest charge on the new capital.

The actual probability of this hypothetical equilibrium under conditions of under-employment is dependent upon several contingencies that are not easy of precise formulation. In the first place let us consider what occurs when technical changes make it continually possible to use a greater proportionate amount of capital to labour without decreasing the rate of interest. The first consideration of which we have to take notice is this ; technical changes are unlikely to come about in such a manner that at a given rate of interest and with given money wages the price level will remain unchanged. With a constant price level and constant money wage rates, it is to be expected that the demand for capital would be raised and the rate of interest consequently increased. It is natural to expect equilibrium to be attained by a fall in the price level with perhaps some rise in interest rates. Equilibrium will demand a rise in the rate of interest that will establish the appropriate relationship between the cost and the output of possible capitalistic devices on the one hand and the real rate of wages on the other hand that will

have to be paid to a man otherwise unemployed in order to induce him to perform a comparable service. This rise in interest rates may, of course, even be zero if the price level falls, and it is this assumption that is most convenient here to adopt. We are therefore, really assuming that technical changes bring about a certain alteration in the marginal productivity of capital when a certain amount of additional capital is being provided.

The possibility of a fall in the price level makes necessary a refinement of our assumption regarding the behaviour of the level of wages. An assumption of a constant money wage rate is an assumption that real wages rise in proprotion to the fall in prices. An assumption that real wages remain constant is an assumption that money wages decline in proportion to the fall in prices. It is, therefore, desirable to consider what will be the likely effect upon employment of technical changes on the basis of these assumptions.

Let us first attempt an analysis on the assumption that real wages remain unchanged. First, what reasons exist that lead one to expect an increase in employment? Technical changes will not normally affect all processes of production; economies effected in production will be concentrated on a certain range of processes leaving unaffected other processes as regards economic efficiency and as regards the value of their net output. Entrepreneurs directing these unaffected processes finding that the money cost of employing labour is reduced will be tempted towards two lines of action—to increase employment until the decreasing marginal value product is brought into line with marginal costs of labour once more; to substitute capital of unchanged cost by labour of reduced cost until substitution is no more economically or technically possible. In addition they will be tempted to bid for the use of more than their proportionate share of new savings in order to duplicate their organisations, and will thus employ more labour as a result of employing more capital. One reaction must, therefore, be an upward pressure on the rate of interest. It is clear that the greater the technical changes, or, more accurately the greater the economy in production that results from technical changes, the greater will be the fall in prices, and, therefore, the fall in wage rates, and the more potent the tendency towards an absorption of the unemployed into the industrial system.

At this stage it is necessary to enquire into the likelihood of the assumption of a constant interest rate being reflected in fact. Despite the possibility of a substitution of capital by labour and therefore a

reduction in the demand for capital given the extent of economic activity, the lowering of money wages should, other things equal, make possible a continuous duplication of old yet economically efficient industrial processes so long as technical changes are introduced and the rate of interest remains constant. A rise in interest rates seems therefore inevitable if we are to assume unemployment to continue. Actually, however, it cannot be assumed that certain processes can be duplicated while other processes are not duplicated, but are subject to technical change, without involving a diminution in the relative values of the products of the old processes *vis à vis* the products produced by the system as a whole. To this extent the demand for capital to be used in old processes at a given rate of interest is limited and the possibility of equilibrium at a constant rate of interest introduced. This is all that is necessary. Alterations in rates of interest are not likely to have very significant effects on the supply of capital, and hence upon the rate of absorption of the unemployed. Hence, it is permissible to retain the assumption of constancy in interest rates merely as a simplifying device.

What, however, will be the likely direct effects of the technical changes? Part of the new capital equipment is assumed to be used in new productive processes replacing certain of the old, while depreciation funds will in part be expended to facilitate the adoption of new processes as the old become obsolete. This secondary effect naturally allows a much greater change in the character of investment than the direction of new investment suggests. In the processes affected by change, the method of production of minimum costs may in the new position demand a much greater quantum of capital per unit of labour employed, even when allowance is made for the fact that the relative cost of employing labour is reduced. If such is the case, the alteration in the use made of depreciation funds will inevitably make for an addition to the workers unemployed. Of the effect of the net additions to the capital of the system, technical change is likely in part to alter the margin of substitution to the detriment of employment. Capital will be used to displace labour previously employed in the old processes, though, of course, there will be a check to this movement as wage rates are reduced. In part, capital will also be used to carry out alterations in processes in those cases where depreciation funds are insufficient. In this case we must expect some re-employment to result from additions to capital. In general, it does not seem unreasonable to assume that of the remainder of the new capital the whole will be used to establish processes

that are operated by proportionately more capital and proportionately less labour than was the rule in the system previously. It is conceivable that the reverse should be the case, but I think that the initiative to mechanisation that springs from the division of labour and the desirability of minute control of the speed of different processes leads inevitably to technical changes that tend in particular processes to be labour-displacing.

Hence, we arrive at this conclusion. Labour will tend to be displaced as technical changes that are labour-saving are introduced up to the given margin of profitability ; this displacement will be reinforced as old capital is liquidated and turned into these new forms. To offset these tendencies, employment will be enlarged as in old processes more labour is used with capital and as more capital is obtained to duplicate processes. In addition, part of the new capital will be used to establish new processes that will employ additional labour, even though the additional labour is proportionately less than have been employed in previous circumstances. There is, therefore, a possibility of equilibrium with a constant proportion of the population employed at a given money wage rate when the capital of the system is being augmented.

It is necessary now to turn to enquire into the difference that the assumption of a fixed money wage makes to the above tentative conclusion. In a dynamic state, the substitution of increased real wages for a constant real wage is evidently going to bring about a distortion in the nature of the technical changes introduced, because it will increase the area within which is possible and profitable a substitution of capital for labour. Hence, more capital will be used for " competitive " purposes and less for " co-operative " purposes. The greater is the claim of labour on real output, the less will be the labour used for " co-operative " purposes, but at the same time the greater the profit in introducing a given machine capable of doing the work of a given number of men. The same tendency will operate to influence the use made of depreciation funds. Consequently, the alteration in real wages will influence the structure of the system to the detriment of employment. The fixing of higher real wages for labour employed in old processes will actually cause some contraction in the amount of labour used proportionately to capital, and, in addition, bring about a tendency to squeeze capital out of its old employment. As a result, additional unemployment will be experienced. We see, therefore, that less employment is to be expected to result from increased real wages than when money wages

are allowed to fall during a period of increasing industrial efficiency.

There are, therefore, two reasonable assumptions on which we can work. First, that technical changes occur when a constant amount of capital is being added at a constant rate of interest to keep employment unchanged at unchanged real wages ; or, failing that, that employment is kept constant when real wages are allowed to increase as money wages are kept constant.[1]

The foregoing is illustrative of the outline of the real change that takes place in the system, but there is another side, the influences of the monetary system, that remains to be sketched. In order to simplify this stage of the enquiry I am going to make certain simplifying assumptions. First, that entrepreneurs have a personality—an economic personality, akin, perhaps to a legal personality—distinct from that of the factors of production who provide *all* the necessary services in production such as " waiting," labour, the use of natural resources, management, and so on. In other words, an entrepreneur takes on very much the same characteristics as a business or a company, when the business is thought of as a separate entity from its partners or its shareholders. Secondly, the assumption is made that all factors of production working for entrepreneurs are paid a fixed income, that all capital is raised on bonds, all labour employed on terms fixed under contract and so on. The entrepreneurs cannot earn an income, though they may make capital profits : their function is simply to provide employment to factors earning incomes. Conversely, they may suffer capital losses, which may take the form of a diminution of their liquid resources, or the gradual decay of their capital, or increased liabilities to the banking system or to other entrepreneurs or to factors. The income of the community is to be reckoned as the aggregate of the incomes of the factors of production, while the system is said to be in full equilibrium when no capital losses or profits are being made, and when there is no undesired shift in the structure of assets.

In equilibrium, entrepreneurs pay out m units of money and receive in payment for goods produced m units of money in return. Part of the income is paid to factors keeping capital " intact "; for our purpose it makes no matter what meaning is read into the word " intact " provided there is a meaning that suggests a perfectly

[1]It might be more reasonable to assume that employment is kept constant when labour obtains that share of the increased productivity which it assumes to be its due and which it is powerful enough to obtain. In that case we should be dealing with a midway position in which real wages would be greater and money wages would be smaller.

definitive line of action to entrepreneurs, such, for example as the expenditure of an amount of money equal to an amount that would have to be spent to keep the physical identity of capital intact, or to keep the value of capital intact. There is of course no one meaning either in science or in business.

Then,

$$m \text{ (outlay)} = md + m(1-d) \text{ (income)}^1$$

where d is the proportion of income earned in maintaining capital.

If outlay drops below income then losses are made unless sales drop below production in the same ratio, in which case there will be an alteration in the structure of assets ; while the presumption is that it is an undesired change. If sales are relatively well maintained then a loss is sustained : the loss is dealt with merely by being written up to balance the loss of capital.

Let us assume that the income of the community can be divided in another way—a proportion c going to capital and l to labour ; *i.e.*,

$$m = cm + lm.$$

If an amount of capital equal to sm is saved and invested (a proportion s of the total income) and remunerated at the same interest rate as the contractual rate r prevailing, then income will have to be increased by rsm, and

$$m + rsm \text{ (outlay)} = m(c + rs) + lm \text{ (income)}^2$$

which under certain conditions will represent the new equilibrium position.

In so far as payment has to be made on the new capital before it has been assimilated into the routine of production, prices may rise to the detriment of consumers. If prices do rise there may or may not be a tendency for entrepreneurs to be influenced, for there is the influence of the additional output that will soon be coming forward. In so far as the additional production has not reached the stage at which it may be put at the disposal of consumers—or purchasers of capital—the structure of assets will in any event be altered. If no profits are made, working capital will be substituted for goods in stock : if capital profits are made, they will take the form of additional assets composed of working capital—goods in process. Again, this may or may not have an influence upon the

[1] The money which consumers spend (or investors invest) can be regarded as being in part earned by providing services used to maintain capital and in part earned by providing services used to operate capital.

[2] An additional amount of interest payment equal to a proportion rs of m will be received to increase income and will be spent to increase outlay.

productional direction exercised by entrepreneurs. In the ordinary way it is to be expected that they will wait to test how the market reacts when the expansion of production meets the final test of the consumers' judgment before setting in hand further schemes for expansion. But this depends intimately upon circumstances.

I make no mention of the possibilities for disequilibrium that can come about from the shifting of demand from consumption goods to investment goods because it is assumed that saving and investing on this scale is accustomed.

It is possible to make a number of refinements. We may assume that part of the new interest payments are saved to build up money balances that are increased commensurately with the increased money incomes, so that no profits or losses are made : so that we can assume that the process is regarded as a purchase of working capital out of capital resources. If the desire to hold increased money balances falls short of the scarcity of finished goods we can assume that stocks are drawn upon : if the reverse position is the case and the demand for money tends to a fall in prices we can assume that entrepreneurs meet the wishes of factors by granting credits and borrowing from the banking system on the " security " of the credits. What is sufficient for our purpose is that monetary equilibrium can be preserved.

In any case equilibrium will be obtained when the money income of the community is augmented by the payments to the additional factors of production. In the case of a reduction in money wage rates the same kind of mechanism is appropriate—the difference being that there is greater friction in the adjustment of stocks and money balances. It is a difficulty of monetary phenomena, of course, that a discrepancy between outlay and income may generate the payment of income and the expenditure of outlay that cannot permanently be sustained, either because of institutional or psychological obstacles. In these cases, there appears to be no reason why an equilibrium should not be reached on these lines. There may be some difficulty and obstruction in settling at the line of equilibrium. The building up of stocks or goods in process or cash balances may all lead entrepreneurs to make mistakes even when demands are in fixed proportions between different goods. But this is to say that there is no simple lodestone to economic harmony. One can only visualise (or for that matter create) the conditions which seem to give rise to the minimum tendency to disharmony and the maximum tendency to stable equilibrium.

We turn now to discuss the possibility of taking into employment the remaining one-fifth of the workers. In an enclosed economy (and it is important to remember that this is the assumption throughout) it can easily be argued that this possibility should be very real. It should on our assumptions be as possible to *maintain* 5,000,000 in employment as it is to maintain 4,000,000. Again, on our assumptions, the real problem is to put them into employment in the first place. In this light it would appear that if there is unemployment and, at the same time, equilibrium, the only reason that can explain unemployment is the impossibility of the *transition* to full employment out of *equilibrium* conditions. That is that disequilibrium conditions must be generated before the transition can be made. What kind of conditions are necessary ?

The primary condition is an increased supply of capital to be taken into employment without any resultant increase in costs of production ; in effect, this means a greater supply of capital at a constant rate of interest. To be perfectly consistent this will be impossible without a rise in the price level of consumption goods—money costs rising in less proportion, for under our hypothesis of equilibrium conditions, it is only under conditions of increasing costs that the supply of capital goods can be increased. Hence, the first step should be an induced rise in the price level of consumption goods stimulating entrepreneurs to make use of the increased supply of capital resources to demand capital goods that will be supplied only under conditions of increasing supply price. There will then come about a demand for capital on the part of capital producers to enlarge the production of capital goods. In the condition of disequilibrium generated, interest rates may be forced upward. It will be seen that a requisite condition of this movement is a reduction in real wages, for it is only as a result of labour demanding a diminished share of the increased product that additional capital goods can be taken into employment at higher prices. We can modify our assumption as to the behaviour of wage rates on these lines : we can assume that it is money wages that must be kept at a constant level, or we can assume that it is desired that real wages be kept constant but that it is impossible to step up money wages as quickly as prices in times of fairly rapidly rising price levels. The difference between these two assumptions leads to differences in the details of the process of capital accumulation, but it does not lead to any fundamental difference in the method by which the accumulation comes about. I propose to adopt the more simple of these assumptions.

By what method does the transition to the new equilibrium take place? To clarify exposition let us assume that additional money resources to the value of k are made available, for example by the sale of government securities to the banking system, to carry through the process of capital building—a proportion i being used to stimulate the demand for consumers' goods by grants, say, to the unemployed. The increased expenditure ik will stimulate consumption good production and bring into employment more labour, thus increasing the money income that is obtained from the production of consumption goods. The fund of resources $(1-i)k$ will be drawn upon to finance orders to capital producers, who in turn will take men into employment and increase the money incomes of capital goods producers. In terms of money, more savings will be made which will be drawn upon to finance further extensions of the capitalistic process, and these will do something to compensate the reduction in purchasing power of the original quantum of savings made in equilibrium conditions. As income made in the production of capital is spent it will be used in part further to expand the demand for consumers' goods, to stimulate further drawing upon the funds of capital resources by consumers' and producers' goods industries. There will be cumulative repercussion effects as the purchasing power circulates between the two sets of industries. Producers of consumers goods, expecting the rise in prices to continue or to be maintained, will sooner or later be disappointed as the fund k is exhausted. At this stage will come a further tendency towards a fall in prices. Entrepreneurs will be able to reduce prices by contracting the scale of operations, for some men will have been given employment only on the condition that outlay exceeded money income: equality between the two will violate this condition. Contraction, by throwing men out of employment, to a scale at which costs can be reduced is the inevitable consequence. The discrepancy between marginal costs and apparent marginal returns will lead all entrepreneurs to reduce output and money incomes and at the same time reduce prices. Real wages will then move upward and there will be a general, though perhaps not continuous movement towards a position of equilibrium.

To appreciate the conditions of equilibrium at which the system will eventually arrive, it is necessary to consider the forces that affect the process of capital production. In the first place, the process will be influenced by any alteration in the rate of interest that takes place during the transitional period. If we assume that the transition

is begun by rising consumption goods prices we may, I think, also assume that a fall in interest rates is so unlikely as not to be worthy of consideration. On reasonable assumptions, it would appear almost inevitable that a rise in interest rates should occur after the capital resources provided have been exhausted. Whether or not the rise takes place before that time will be dependent upon the rate at which resources are released. It is more reasonable to assume that some rise in interest rates is effective throughout the transitional period. If we neglect the very real difficulties (contractual and also, probably, psychological) that attend the establishment in times of relative prosperity of debt carrying high interest charges, we see that the rise in interest rates may be looked upon as an attempt on the part of the system to prevent capital in times of rising prices and falling real wages from being pushed into occupations where it will be found to be inefficiently employed when real wages increase. The use of capital is restricted to the relatively more profitable employments, and the real return demanded from its marginal uses correspondingly increased. In this way, when equilibrium returns and real wages rise and interest rates fall, a shock absorber will be found which will help to prevent returns on the capital falling below the new level that is in the future to be sustained. Again—apart from the same very serious difficulties that are the results of contractual indebtedness—any tendency for the price of capital goods to advance more rapidly than the prices of consumption goods raises the marginal productivity of capital that has to be attained before investment becomes profitable, and hence allows under equilibrium conditions a lower degree of productivity which is at the same time consistent with profitable investment. Other things being equal, the higher the interest rates at which the new capital is invested and the higher the price of capital goods in relation to the price of consumption goods, the less will be the misdirection of the capital resources provided. The distinction that we have to bear in mind is the following : additional capital can only be brought into operation as a consequence of a fall in real wages below the equilibrium position. Some capital can be maintained in employment when real wages have again returned to the equilibrium level, but other capital will only be employable at lower real wages and, hence, will eventually be lost when conditions have returned to normal.

The second variety of influence upon the amount of capital permanently added to the system has a different basis. If the amount

of the resources to be additionally invested is fixed in terms of money then the amount of capital that under any circumstances can be added from this source is a function of the rise in prices. A very considerable inflation is therefore likely to dissipate these resources to some extent—as well as bring very considerable disharmony as a result of too great a reduction in real wages. Other things being equal a greater amount of invested capital is likely to be obtained when the rise in prices is small than when it is large.

We turn now to the third variety of influence which perhaps throws some light on how far we can expect other things to remain equal. An amount ik is spent upon consumption goods. To a certain extent the increased demand will be met from stocks and the liquid resources passed from entrepreneur to entrepreneur as each tries to build up stocks of circulating capital preparatory to meeting the increased demand coming from consumers. It is impossible here to generalise about the ultimate effect. Any impulse to expansion of consumers' income may be lost in the desire on the part of any one in the chain to pay off indebtedness, or the willingness of anyone to exchange stocks for cash. An amount of the increased demand may be met by a rise in prices and result in accretions to capital. These capital windfalls may be invested in fixed " machines," or they may be turned through the hiring of more labour into working capital. It may reasonably be expected that partly the one and partly the other result will be experienced. But again part of the resources may be held back to improve the liquidity of the entrepreneurial positions. In so far as these sums are used to expand production in the old lines by their expenditure on plant and circulating capital, we can expect a permanent increase in capital to result. In so far as they are used to finance an adjustment of production to what is considered a transient disturbance no permanent additions may result. In any case the building up of capital will only be done at the expense of a rise in prices. In so far as the supply of capital increases, the windfall profits will be absorbed into consumers income which, when spent, will result in further capital gains as prices are forced upward pending the arrival of increased production at the consumers' market. At this stage a further expansion will have to be financed out of the remaining $(1-i)k$ units of resources. As these resources are brought into circulation the same process will be carried through.

One can see the process as a continuous accretion of windfalls spent on capital goods, with perhaps corresponding windfalls also

obtained in the production of capital goods. In so far as the cost of supply of capital goods rises correspondingly and simultaneously with the increased money spent upon those goods, windfalls will be absorbed more quickly into the stream of consumers' income, and the process of adding to the capital stock will more quickly be accomplished. In so far as the expenditure on capital goods of windfalls merely bids up prices without increasing supply the process is retarded and for a given amount of resources to be expended the amount of capital supplied will be less. In other words the greater the rise in the price of capital goods that results, the more profitable will relatively inefficient ways of producing goods become. Taking this consideration in conjunction with that previously enunciated, what is desired is as small a rise in the price of capital goods as is consistent with the permanency of the additions of capital goods. Evidently the elasticity of supply is largely a function of the technique of production.

These then are the influences that will tend to be of the greatest importance. First, the willingness (and the ability) to meet either the increased demand for consumers' or producers' goods from stock, and the willingness to purchase greater liquidity at the expense of stocks : secondly, the possibility of checking the growth of profits by increasing the flow of goods to the consumer comparably with the increased in the incomes of consumers . thirdly, the possibility of meeting the increased demand for capital goods without first stimulating supply by greatly increased profits : fourthly, the extent to which windfall profits are, in fact, used for investment purposes, for this will be an influence upon the extent to which the increased activity raises interest rates and thus discourages the use of capital.

Let us try to summarise the process described. The impact of the increased purchasing power will first be felt upon stocks of consumption goods ; but we may also expect some increase in prices. If there is to be any permanent result of this inflationary movement there must be a rise in prices sufficiently great to make entrepreneurs feel that it will be profitable to expand production under conditions of increasing money costs. Let us assume that this is so and that they invest on capital goods some of the additional supply of capital and some windfall profits. Capital goods will tend to rise in price, partly as a result of increasing cost, partly as a result of the flow of finished goods being insufficient to meet demand even when supplemented by free stocks. Some part of the new incomes will be saved and invested : some of the profits obtained by

capital goods producers will be saved and invested : some profits on production as a whole will be retained to finance an increased turnover. The increased incomes, in turn spent on consumers' goods, will tend to raise prices because of the slowness of goods in coming forward to the stage at which they are consumable, so that profits will be obtained that are automatically (unless a contrary action is taken) invested in circulating capital. It is to be expected that even after the augmented resources are absorbed into circulation—an inevitable consequence of increased employment and income, increased business turnover and increased investment income—that conditions of profit will lead to a further expansion of business, further demands for capital goods only to be supplied at increasing cost and further capital resources only to be supplied at increasing interest rates, and this latter tendency will be increased because new savings out of the newly created incomes will be largely unavailable for investment. Evidently by the letting out of stocks, by the saving of money incomes, and by the holding by entrepreneurs of greater cash reserves, a position of equilibrium between consumers' income and outlay and an equilibrium in the even supply of goods through the various processes of production will (or rather can) be established. Apart from technical changes, prices will be back at the old equilibrium level. Further re-adjustment is inevitable. There is a position of monetary equilibrium but not of productional equilibrium. Some factors of production will be thrown out of employment because of their now reduced value productivity. Capital will not be reproduced as it wears out, nor debts re-incurred as they become capable of liquidation. But some capital will be reproduced at lower prices and some debts re-incurred at lower rates of interest. In short, there will be an alteration in the margin of profitableness. Costs of production will in fact for a time be somewhat inflated, and adjustment will have to be made to a lower level of costs as well as to a lower level of prices.

There will be a certain amount of capital wastage as competition of unburdened firms forces out of existence firms burdened with high interest charges. Frictions of this kind almost inevitably make for a contraction in incomes when experienced at a time of *contraction* to a new equilibrium, because they interpose a psychological obstacle. In addition to this difficulty, the contraction in production and income will tend to cause a disequilibrium in the flow of goods through the various processes, and in this case will tend to induce a contraction in income and outlay below the theoretical equilibrium

level. Or it will cause a fall in prices that will tend to have the same effect by retarding enterprise and delaying the purchase of capital. Hence, although a certain amount of capital will have been added permanently to the stock and thus have made possible to some extent the re-employment of the unemployed, the absorption will not come about easily even when the first phase of the induced disequilibrium is passed. And although there will exist the seed of equilibrium, for capital, savings, and depreciation funds have all been added to equally with employment, yet over-investment and over-employment will necessitate an oscillation around the new equilibrium position before it can be reached.

Even assuming that the monetary disequilibrium is kept within control, *i.e.*, that the rise in prices does not take the shape of a continuously ascending spiral, it appears impossible to give any kind of indication of the proportionate increase in capital that can be so obtained. The element of time is one important difficulty that we have altogether ignored, and a great deal must depend upon the magnitude of the disturbance. Nevertheless, the conclusion emerges that it may be necessary in moving from one equilibrium to another to pass through a position of disequilibrium. This disequilibrium would be of a monetary character that would have no real counterpart in a non-monetary economy.

JACK STAFFORD

REVIEWS

Gold, Unemployment and Capitalism. By T. E. GREGORY. (P. S. King. pp. 308 + xvi. 12s.)

APART from three essays—*The Present Position of Banking in America* (1925), *What Can Central Banks Really Do?* (1925), *The Economics of Unemployment in England,* 1660—1713—these essays and addresses were written or given during the depression between 1930 and 1933. As a whole they present a history of the depression. They are not, however, historical in the ordinary sense ; although *The Great American Panic of* 1933 gives an account of the banking crisis against the background of a preliminary survey of American banking technique and weakness, and a description of the legislation formulated and the steps taken and prepared to stay the panic. Apart from these four essays the volume is largely concerned with a history of ideas, or rather it *is* a history of ideas and a criticism of them at the same time. For example, Professor Gregory deals with certain conceptions that have gained currency as having validity in theories either connected with the cause or the dispersal of depression. Essays which can be said to fall in this category include that on Gold Mal-distribution, on The Balance of Trade, on Self-Sufficiency, on Technological Unemployment, on Planning, and on The Future of Capitalism. In the case of the first essay mentioned, Professor Gregory shows clearly how opinion, merely by adopting an idea superficially reasonable and apparently conclusive, is led astray in failing to observe the dependence of its " cause " of depression upon other ignored but more important forces. Or again, technological unemployment, by far one of the most popularly ascribed causes of depression, is shown to be a phenomenon which cannot be accepted as an initiating force save in its context of circumstances, which itself is subject to rigorous analysis. In neither case is the significance of the point mentioned dismissed : by analysis in both cases is shown the essential dependence of these matters on the operation of that part of the economic system to which they are intimately related. In the same way we might include the essay on Central Banking (p. 165) as being a warning to be read by those who see in central banking the cure-all of economic ills, or equally well—

together with *Current Problems in International Finance*—one for those who see no relevance in the discussion of monetary affairs to the real problems of insufficiency or mal-distribution of efforts or the like real difficulties with which every depression confronts us. Another warning to those who would adopt a single-minded remedy—without thinking of its implications—is provided by the essay on planning. Nothing that this essay contains will halt the thinking *and* whole-hearted planner, but, again, what it does is to analyse the ultimate meaning of this particular concept of society. In the same way the balance of trade and self-sufficiency—the one very much stressed as playing a significant part in disharmony and the other looked upon in some quarters as being a likely plan to prosperity—are considered in their full meaning and, in this case, dismissed as having no pregnant significance. As examples of how much light can be thrown by the scientific analysis of a penetrating mind, these essays are outstandingly imposing : they are as destructive of facile optimism as they are of unthinking pessimism.

There are four essays concerned intimately with the problems of Great Britain, which together provide a commentary on and an analysis of British economic experience between 1925 and 1933 as seen by a monetary economist. In the first, p. 13, Professor Gregory makes an analysis of gold movements an analysis of an economic position ; in his second essay in this class, the Addendum to the Macmillan Report, our economic experience, as seen in the light of the analysis, is summarised and used as a basis for the criticism of the various remedies for the difficulty of our position ; in the third and fourth we look into the monetary future and have finally an analysis of the forces to which we can expect to be subjected. In a world which is changing so much and so quickly, it is a tribute to the author that this presentation appears as analytically sound now as when it was written.

In conclusion, it must be said that it is an impossible task to review a work of this kind in a way that will give the reader more than the merest idea of the good things to expect. One can only say that although these addresses are concerned with matters extremely topical, they are written in such a way that the book has very much more than the fleeting (but great) value of accurate comment and understanding of the present. It is an example of economic analysis making use of present problems.

J.S.

Essais Sur Quelques Problèmes Economiques et Monétaires. By CHARLES RIST. (Paris : Recueil Sirey. 1933. pp. XVI.+501.)

THIS volume contains eighteen essays and a preface all of which are worthy of their distinguished author. The preface is mentioned because it too is an essay to which the reader would be well advised to give the most careful consideration before proceeding to the other essays in the volume. In this preface Professor Rist lays down that the essential work of the economist is to understand and explain current economic phenomena, which statement may be taken as a definition of his own attitude. As an economist he is much more concerned in diagnosing economic ills and, by implication, in showing how economic health can be maintained than he is in propounding measures whereby these ills can be transformed into a state of health not hitherto attained. This does not mean that Professor Rist regards his work as having merely an academic interest ; on the contrary he hopes, and with good reason, that the reader will recognise that it has an immediate practical value in indicating the direction of rational economic policy.

The eighteen essays are distributed into four groups. The first group contains seven essays on post-war monetary problems, the first (1925) on the case for the stabilisation of the franc, and the third (1928) on the actual process of stabilisation, having permanent value for both the theorist and the historian. The other essays in this group are of topical interest, for they are concerned with vexed questions of gold and the price level, and may be read with profit by anyone not thoroughly acquainted with the French point of view on these questions. The second group consists of two essays of particular interest to economic theorists, especially the one on the theory of saving, seeing that it was published as long ago as 1921. In the third group, two of the essays, one on strikes of workpeople in France (1907) and the other on the finances of "syndicats ouvriers" (1911), with comparisons with the position in England and Germany, seem now to belong to a remote past, though one can easily recall the interest with which information of the character contained in the essays was received at the time when they were written. To-day, however, the most interesting essays in this group are the one in which Professor Rist states his views on the origin and character of the crisis which came upon the world in 1929, and the one on the economic situation of Austria in 1922, which, in the light of later events, now reads almost like a prophecy. The fourth group contains three essays on questions of economic policy. One of these essays

on war indemnities and foreign trade (1919), and another on the economic conditions of the payment of reparations (1922), serve the purpose of showing that Professor Rist did not consider it consistent with his function as an economist to allow those who read his writings to remain ignorant of the difficulties that stood in the way of the realisation of wild expectations.

Finally, this brief notice ought not to close without a mention of the remarkable clarity with which the reasoning contained in the essays is set forth.

G.W.D.

The National Income, 1924–31. By COLIN G. CLARK. (Macmillan. pp. 167. 8s. 6d.)

Bowley, Stamp, Flux, and Coates have estimated the national income of the United Kingdom for particular years—Coates for 1931 and Bowley, Stamp, and Flux for 1924. Mr. Clark in this new book estimates the national income for each of the years 1924 to 1931. He promises to keep the figures up to date and his preliminary estimate for 1932 has already appeared in the ECONOMIC JOURNAL, June, 1933.

In his first chapter, Mr. Clark defines what he means by national income and then approaches the problem of estimation first, by a detailed consideration of incomes, salaries, wages, profits, and other constituents of the national income and then secondly by a valuation of the goods and services on which the national income is spent. His final chapter presents calculations on prices, costs, investments, and savings in an interesting attempt to test out in practice some of the monetary formulæ of Mr. Keynes published in his *Treatise on Money*.

The compilation of estimates of national income year by year is quite a different proposition from making estimates for certain chosen years such as 1924 for which the statistical information collected for the Census of Production and the Wage Enquiry in that year and the results of the Census of Population taken three years earlier were available. At the time Mr. Clark wrote this book the Ministry of Labour Report on Wages for 1928 was published but not the one for 1931 and he had only some of the preliminary reports of the Census of Production (1930) and none of the results of the Census of Population (1931). It demands courage to extrapolate for 1924 onwards to 1931 on the basis of incomplete information—especially when the estimates are going to be checked a year or two later by precise figures.

The following, therefore, are suggested as points still under discussion which readers of Mr. Clark's book should be aware :—

1. Page 20, Table V. According to the Census of Population, 1931, the number of male " employers and independent workers " in England and Wales increased from 1,312,400 in 1921 to 1,492,602 in 1931. The number of male " employers and independent workers " in Scotland was 180,700 in 1921 and it is certain that there was an increase for Great Britain as a whole between 1921 and 1931. The decline of 17 per cent. in the number of male " employers and independent workers " which Mr. Clark suggests between 1921 and 1928 is therefore wrong, or is explained by a change in trend between 1921 and 1931.

2. Page 29, Table IX, and pages 46/47. It is still not clear how the rapid increase in the number of salaried persons during post-war years is to be explained. It may be partly due to an under-estimate of employers and independent workers as suggested above. These figures will need to be checked by the final reports of the Census of Population (1931).

3. Page 58. Mr. Clark estimates wages paid in 1924 as £1,413 million, compared with £1,600 million estimated by Bowley and Stamp and with a still higher figure suggested by Dr. Snow. Part of the differences between these estimates is due to slightly different definitions of " wages " and " wage earners." Incomes of shop assistants, for example, amounting to perhaps as much as £100 million in 1924 are included by Bowley and Stamp as wages and here by Mr. Clark as salaries.

4. Page 72, Table XXV. The estimate of profits and interest makes no allowance for changes in stock valuations but even if such allowance is made there is still some divergence between the figures of Mr. Clark and those suggested by Stamp. For example, Mr. Clark estimates profits (with an allowance for stock valuation) in 1929 as 4 per cent. greater than in 1924, while Stamp suggests a decrease of 5½ per cent.

5. Page 76, Table XXVI. The number of personal incomes over £147 should be 5,065,000 in 1924 and 5,270,000 in 1928 instead of 14,000,000 and 14,875,000 respectively. These corrections straighten out the bottom part of the curve shown in Diagram 2 on page 75. The reader is warned that the curve is drawn on a double logarithmic scale and that the division lines do not represent mid-values of the groups.

6. Page 101, Table XXXIV. The gross output of the cotton industry (free of duplication) for 1930 should be slightly higher than £118 million instead of £103 million and the gross output of the woollen industry in 1930 £92 million instead of £112 million. The figures for other years need consequent re-adjustment.

7. Page 109, Table XXXVIII. The net output of industry is now shown by the Census of Production (1930) to have been less in 1930 than in 1924 and therefore Mr. Clark's figures which show a slight increase need to be revised. The effect of this revision would be to reduce his estimate by at least £60 million.

H.C.

Increasing Returns. By G. T. Jones. (Cambridge University Press. 1933. 12s. 6d.)

There is enough both of real achievement and of dangerous and impetuous guesswork in this volume to make the untimely death of its author a loss in a double sense : loss, in that we have been deprived of a powerful and ingenious mind and loss in that that mind never had the opportunity to create for itself the mature caution with which all scientists, and above all, economic statisticians, should hedge a restless, thrusting imagination.

The brilliance of this book lies in the discovery that there is a very simple method of determining to what extent, over a long period, any expanding industry has been subject to increasing returns, defining this term as meaning the production of a given quantity of goods with the use of smaller quantities of the factors of production. To summarise the method very briefly, it consists of four steps. First, the trend of selling prices in an established industry will be closely paralleled by changes in money cost of production. An index of the former, therefore, may be accepted as an index of the latter. Second, changes in money cost of production will arise in two ways : there may be changes in the *prices* or changes in the *quantities* of the factors of production engaged in making a constant unit of the final product. Third, it follows from this that if, in an index of changes in money costs of production, allowances are made for changes in the *prices* of the factors of production, then the movements which still remain will record those fluctuations in money cost which are due to changes in the quantities of the factors of production necessary for making a given article, *i.e.*, they will record changes in " real " cost of production. Fourthly, if these changes in " real " cost are correlated with changes in the size of the operating

units then certain presumptions can be drawn as to the relation between the size of industrial units and the efficiency of the industry of which they form a part.

This method is applied to four industries over a long period before 1914 : the Lancashire Cotton Industry ; the London Building Industry ; the Cleveland Pig-Iron Industry ; the Massachusetts Cotton Industry, and the American Pig-Iron Industry. Very elaborate and tortuous statistical calculations show that in the London Building Industry efficiency rose about 18 % in the latter half of the nineteenth century and fell 1 % in the first decade of the twentieth. The figures for the same periods for the Lancashire cotton industry are an increase of 22 % and a fall of 5 %. There does not appear to have been any appreciable change in the efficiency of the Cleveland iron industry between 1885 and 1910. In the Massachusetts cotton industry, efficiency increased 46 % between 1850 and 1900 and fell about 1 % between 1900 and 1910. In the American iron industry, efficiency increased by some 30 % between 1885 and 1910. Upon the basis of these calculations certain general conclusions are drawn. The efficiency of the Massachusetts cotton industry was increasing much more rapidly in the nineteenth century than that of the Lancashire cotton industry, and, between 1880 and 1900, the efficiency of the American pig-iron industry was increasing more rapidly than that of the Cleveland industry. More important still, to quote the author's own words, " The nineteenth century was characterised by a progressive diminution in the quantity of resources consumed per cent. of product in British manufacturing industries. By the close of the century, however, this movement had spent its force so that real costs remained almost constant during the first decade of the twentieth century in at least three of the basic industries of Great Britain."

If these conclusions are sound they are, of course, of very great importance and they embody implications in other directions of which the most is made in the author's conclusions. It is, therefore, vital to determine how reliable are the statistical material and methods employed. A mass of detailed information has been collected concerning each industry, the reliability of which could only be adjudged by one conversant with the particular industry. But if the material regarding the other industries is no more satisfactory than that employed in the case of the Lancashire cotton industry there is reason to suspect the final conclusions. For the index of selling price, and hence of money cost of production, in the

Lancashire cotton industry the prices of a group of grey cloths are taken. But there is a serious break in comparability in 1899 which is boldly jumped. The assumption is then made that what happens in regard to costs of this narrow range of goods will be true of the multitude of products turned out by the industry (p. 40). There is no evidence in support of this. The next step is to determine changes in the prices of the factors of production. For raw materials the price of mid-American cotton is taken. The complete ignoring of the prices of Egyptian cotton, which follow quite different trends, seems to be wholly indefensible. For an index of the price of labour it is very difficult to see what the author really wants. But Mr. G. H. Wood's index of average weekly full time *earnings* is taken up to 1906 and continued by using the Standard Lists of Wages in the cotton industry, which, of course, only measure *rates* of wages. This splicing of two dissimilar series is countenanced by the statement (p. 103) that " there has been little change . . . in technical equipment (in the cotton industry, 1906-13) "—a statement which is almost certainly incorrect. For movement in the item " Other Expenses " the author had little information, so he employed for this purpose a ten years moving average of the Sauerbeck Index, and when this gives out in 1914 he splices it to the Ministry of Labour Cost of Living Index Number. Having now obtained series of prices for the different factors in production the question arises, " How are the factors to be weighted ? " The author only has two pieces of evidence. One is drawn from the analysis of the accounts of *one* Oldham firm, both spinning and weaving. This shows that cotton was 69 per cent. and wages 18 per cent. of total cost. The other is a set of figures drawn from a Government Report in 1889, which is brought up to 1910 levels in some undefined way. These show that cotton and wages are 53 per cent. and 25 per cent. of total cost respectively. These two sets of figures clearly disagree widely. So the arithmetic average of them is taken and the result justified by other calculations on pp. 105—106, in which there are at least three probably unsound assumptions. The section which follows therefore, which purports to measure the possible errors in the final calculations seems highly artificial.

This criticism of the authors detailed work is, in the circumstances, naturally made only with very great reluctance. But, this is an important book both for its impeccable analysis and the novelty and soundness of its general methods, and since it will undoubtedly have much influence upon later work in this field, it is no more

than justice to examine it with the rigour that its lamented author would have wished.

J.J.

Australia in the World Crisis, 1929—1933. By DOUGLAS COPLAND. (Cambridge University Press. pp. 209 + xii. 9s.)

THIS volume is a record of the Alfred Marshall Lectures delivered in the University of Cambridge in 1933. These lectures provide a narrative of Australia's troubles and her method of solving the problems of depression. But even in narrating events, Professor Copland is not purely descriptive, for the method he employs consists in describing depression from several angles—of the loss of income, of the balance of payments, of deflation, of public finance, and of investment policy. This method allows the theory and the mode of intervention to be continuously referred to the problems to be solved. The major theme of the book is an explanation of Australia's early experience of depression—an explanation relying more upon the position of raw material production than upon the structure of Australian economic organisation, and a critical and almost wholly favourable disquisition of what Professor Copland calls the Australian middle course of overcoming maladjustments and social impoverishment—the "deflationary-inflationary method." In the author's view, the chief problems to be solved were the difficulties of bringing about the necessary monetary changes that a lowering of money income entailed, and the re-adjustment to a lower level of real income that falling export prices and a cessation of foreign borrowing brought about. He is much concerned with the part played in these re-adjustments by several institutions, the Arbitration Court, the Loan Council, and the Commonwealth Bank, for he sees in the action of these organisations a nice balancing of deflation and inflation—to both of which terms he contributes a somewhat unusual and not unobjectionable definition (p. 116). In particular the author praises the Commonwealth Bank for acquiescing in depreciation or de-valuation and for its willingness to allow an increase in the floating debt. He sees virtue in a greater economy in state and Commonwealth finance that does not go so far as to bring a drastic reduction in money incomes. He approves of a reduction of individual money incomes brought about by the fall in money wages, by a scaling down of interest rates and fixed debt charges, and by a reduction of salaries to state employees. Finally, he comes to the conclusion that though these re-adjustments

designed to meet depressed conditions have been largely successful in making tolerable a world situation that many countries have found destructive of social fabric, they may still be necessary to help Australia to meet the reduced real income that must, in his opinion, be her lot for some time in the future.

Professor Copland is at times somewhat complacent towards Australian policy, and he perhaps does not place the same emphasis upon the part played by fortuitously favourable circumstances as probably would an English critic. For example, the policy adopted by sterling made devaluation much more simple and certainly more effective ; the more favourable experience of wool producers, in comparison with that of other raw material producers, has surely been of significance ; in the same way, the easement of the transfer problem has made Australia's position more tenable. Again, at times the author appears too inclined to look upon the devaluation of currencies from a local point of view, forgetful of the ultimate frictional difficulties that we know such a policy entails. He is, too, somewhat critical of our own tariff policy because he proves that a lowering of tariffs is desirable in Australia. Without defending tariffs as applied in this country, it is surely easy to observe the essential difference between the long term problems confronting the two societies. But perhaps the chief criticism must be levelled at the philosophy which leads Professor Copland to base calculations of variations in income on variations in exports according to the rather ingenuous equation on p. 12. In the last essay he modifies this calculation to some extent by enquiring how far it may be possible for Australia to augment her income in the face of diminished exports by producing more " protected " commodities. The production of protected commodities with the production of exports, accounting according to Professor Copland for some 50 per cent. of the national income, are together made the basis on which the total national dividend is earned—the demand for sheltered services apparently being an induced demand arising from the demand for exports and protected commodities. This is difficult to accept as ultimately valid and even as the basis for rule of thumb calculations it is, I think, as liable to lead to error as enlightenment.

J.S.

Juvenile Unemployment. By J. JEWKES and A. WINTERBOTTOM. (Allen and Unwin. 5s.)

THIS admirable book has been published for so many months and has had such an excellent press, that it is safe to assume that anyone

who reads this review will already be acquainted with its main thesis. He will also know that the authors have collected a great deal of information about the extent of juvenile unemployment, which is not available from official sources ; and as a result of this enquiry that unemployment is found to be far more serious than has appeared before. I shall confine myself, therefore, to two propositions which seem to me of fundamental importance in this study.

One is that a plentiful supply of juvenile labour—already cheap labour—results in actual exploitation of the boys and girls. Because there is a large supply of fourteen year olds, wages are low and employers therefore are able to be wasteful with this kind of labour. When labour is scarce and wages high, employers are forced to look round for labour saving methods and labour saving machinery, but when labour is plentiful there is no need to economise. The result is that instead of creating a demand for more intelligent and skilled workers, for boys and girls who have attended a Central, Secondary, or Junior Technical School until the age of sixteen, the ones of fourteen are taken, and the others are left idle. One cannot blame employers, they will naturally use the cheapest labour available, but blind alley employment, with all its attendant evils will continue to corrupt our children unless drastic steps are taken. Raising the school leaving age to fifteen would withdraw from the market in the area of industrial Lancashire covered by this study, 60,000 children. Their places would be taken partly by older workers at higher wages, and partly by labour saving methods, both results which would be of lasting benefit to the community.

But it is the Introduction to this book which should be read and pondered over by everyone who is perturbed—and who in Lancashire is not—at the industrial outlook. There the authors urge, in moderate and convincing language, that our only hope of success in the face of competition of the Eastern Countries, with their lower standard of life and lower wages, is to develop an industrial population of greater intelligence and adaptability. This can only be done by giving our boys and girls more education when they are young, which will form a basis upon which further education through adult life can be based. Instead of this, what do we do ? At the most impressionable age, fourteen, when the children of the well-to-do are beginning their public school career, when the need for proper medical care and supervision is essential, and when boys and girls are benefiting most from their school life, both intellectually and morally, we turn out annually, thousands of immature human beings, not to the shelter

of a job, but, in many cases to a life of idleness and insecurity. We do this not under the stress of a need for every available worker, but at a time when thousands of sixteen to eighteen year olds are unemployed. "The deeper the industrial depression the stronger the case for sheltering the young from its effects," say the authors. Obvious? Well, evidently not. It will have to be said many times yet before the nation is roused to take action, but this book provides unrivalled ammunition for the fight.

It is not often that a survey issued by the Economics Department of a University has so much immediate and national effect as has this book, probably, because economists as a rule are so afraid of being propagandists that they curb their natural feelings. It is to the credit of Mr. Jewkes and Mr. Winterbottom, that they have presented cold facts in such a way that they become lighted torches showing the way to the various proposals that are classified under the heading "Palliatives," and the solution of "Raising the School Leaving Age."

There is little doubt that this enquiry has been responsible more than any other single fact for rousing interest in this urgent matter, so that the Lancashire Education Committee has already called a Conference to consider the problem, and there are signs throughout the country that things are moving at last. The Manchester University through its department of Economic Research is doing a great service to the nation.

S.D.S.

Essays on Monetary Management. By JACK STAFFORD. (P. S. King. 1933. 7s. 6d.)

MR. STAFFORD has given his book a very modest title; but an attentive reader gradually comes to feel that these four apparently independent essays are connected by a strong systematic view. The task which the author has undertaken is to analyse the disequilibrium apparent in the post-war state of growing rigidity in the economic system, of great disturbance in the international relations, of rapid technical changes and intensified swings of the trade cycle, and to examine the weapons which the monetary system can place at the disposal of a national economic policy against internal and external shocks.

The main exposition is preceded by an introduction outlining some specific features of the modern trade cycle—not so much a general theory in dogmatic steps as a survey of the typical forces working towards lasting disturbances in large parts of the system.

From the special point of view of a theory of the trade cycle, this starting point is rather a broad conception but quite an appropriate one for an analysis dealing with the monetary consequences and effects of disequilibrium.

The order of the following three essays does not correspond with the generality of their respective subjects. *Income and Banking Policy*, inaugurating the series, deals with the special problem of " reflation " and an active policy of the banking system during the depression phase of the cycle. The two other studies go outside the narrow space of trade cycle problems and comprehend also all the external influences mediated by the money and credit system. *The Relation of Banking Technique to Economic Equilibria*, known to readers of this journal, analyses the possibilities of management by the decentralised members of the banking system, within the scope of free action which the central bank guarantees. Mr. Stafford shows that this scope is rather a wide one, if only the member banks know how to use their assets and how to accommodate the proportions between the various assets (especially the liquid assets) to the turn of the trade cycle and the international balance of investments, and in the long run to the rate of progress and the technical structure.

Central Banking Problems is the central essay of the book, not only as the most extensive but also as the exposition of the general principles and machinery of a modern central bank policy. It completes the partly technical statements of the other essays by inserting the problems of monetary management into the dynamic process of the economic system as a whole. The author comes to a very definite decision in favour of a banking activity towards internal stabilisation, recommending old and new tools of banking management as a means to hasten or to check, to intensify or to reduce the orthodox manipulations of the discount rate. But he does not side with the fashion of the day in advocating an insulating policy of autarchy. He strives for a compromise protecting the home market against short run disturbances from abroad and yet maintaining a close contact with the trend of the international development. How Mr. Stafford critically establishes this intermediary position is the book's original achievement, the true merits of which render a short review a very inadequate attempt. One has to look up in the first essay how he expounds step by step the antagonistic process of increasing deflation and compensating credit expansion, starting from quite simple assumptions, proceeding to an increasingly

complicated but always transparent texture of the relations between the monetary factors themselves, and between the flows of money and of commodities. His statement of the mutual influences of the external and internal trade cycle (p. 153—167) or the sections describing how disturbances due to alterations in the relative interest rates between two countries may be offset (p. 208 *seq.*) are a pattern for critical investigation, resulting not only from a gift for deduction but also from a developed taste for the nuances of his subject. No one will be surprised that this kind of analysis raises a new question with every answer it gives, beginning with the secondary influences of a reflationary policy on price relations, and ending, in spite of the author's reservations, with the problems of planning suggested by the instruments, and by the spirit of so active a banking policy.

As a product of modern economics this book is a comfort for people believing even to-day in the illuminating force of simple reasoning. It disdains adorning trivialities with mathematical painting and uses formulæ only where they really help to reveal complicated inter-relationships; all the more may its author be certain that his arguments will find a hearing within the circles practically concerned.

A.L.

International Trade. By BARRETT WHALE. (Thornton Butterworth : Home University Library. pp. 252.)

MR. WHALE has managed to compress into the small space of this volume a complete exposition of the theory of international trade, a treatment of the form of international payment and foreign exchange, a criticism of the theory of comparative costs, a discussion of the theoretical and practical effects of protection, a section devoted to tariff bargaining and the forms of commercial treaties, and a survey of the possibilities for international trade. The treatment of each matter dealt with gives a complete fundamental knowledge that will serve immediately for the further study of these subjects. In dealing with the theory of international trade or the subject of tariffs a simple presentation so easily leaves a gap between simplicity and actuality. But here there is none. To take the first example, the reason may be found in the discarding of the theory of comparative costs, which does tend either to artificiality or complexity, and the adoption of a "theory" of international pricing. There is, I think, no doubt that a theory of comparative costs (or advantages) when modified—perhaps so much so that it loses a large part of the value of calling

attention to real cost differences—is capable of imparting correct understanding. But it is appreciated with difficulty and its modifications appear to be, if they are not in fact, a destruction of itself. Mr. Whale avoids this difficulty by using the theory of comparative costs for the purposes of criticism.

It cannot be said that this is an easy book to appreciate ; but it is not so difficult as its scope would suggest ; this is due to Mr. Whale's clarity. Even so the reader must be prepared for intricate analysis and concentrated reasoning, but he will be rewarded by the understanding of a book which has not shirked making use of methods and analysing problems only recently adopted or considered.

Mr. Whale is somewhat severe in his criticism of tariffs and one does not always find it easy to tell whether his severity is the result of theoretical or practical reasons—in this case a very real difference. Thus on p. 152 his reasons for rejecting the argument that tariffs do not make for stability appears confused—although no doubt he is right in his appeal to facts. On p. 162 there is a suggestion of understating the difficulty of detecting dumping that is due to state action in the statement that commercial dumping is less easily discerned.

In conclusion this work is very much to be recommended to the student who desires an introduction—or something more than an introduction—to this subject.

J.S.

British Industries and their Organisation. By G. C. Allen. (Longmans, Green. 1933. 10s. 6d.).

The greater part of this book is taken up with an examination of the condition and the changes in the structure and organisation of a number of representative British industries from the end of the war until about 1931. The industries selected are, with one exception, among the older exporting trades—coal, iron and steel, shipbuilding and marine engineering, cotton, and woollen and worsted ; the exception is a new branch of engineering, viz. the motor trade. The general reader and the undergraduate student of industrial organisation will be grateful to Professor Allen for these admirably succinct and lucid surveys, based largely upon the material provided by books and articles that appeared during the last decade, and liberally stocked with official statistics. The value of this work as an introductory study would, however, have been enhanced if more

of the newer trades—*e.g.* artificial silk manufacture, and electrical engineering—had been selected for detailed treatment.

The more advanced student, while regretting that so little new data are to be found in the accounts of specific industries, is likely to judge the book mainly by the quality of the two general chapters (X and XI) at the end, which are headed, rather ambiguously, " British Industry since the War " and " Changes in the Structure of Industry." His verdict will probably be that, although these sections touch upon many issues that are relevant to the main purpose of the book, they are inclined to be discursive and are lacking in continuity with the previous chapters dealing with individual trades. At the commencement of Chapter X, after shortly summarising the statistics of production and employment since the war, Professor Allen submits that the conclusions raise two questions. " First, how is the change in the relative importance of the different industries—a world-wide phenomenon—to be explained ; and secondly, why did Great Britain of all the industrial nations suffer the most severe losses in the older trades while failing to secure a compensating share of the growing industries ? " It is not to be expected that the earlier chapters would provide a complete answer to either of these questions, and Professor Allen proceeds to elaborate the answers somewhat by reference to factors which are either not at all or only partially within the control of British manufacturers. But the criticism may, we think, legitimately be advanced that the answers to these two questions are not, but should have been, made the main theme of the book's conclusion. More particularly, it may be complained that the reasons for Great Britain's failure " to secure a compensating share of the growing industries " are scarcely discussed at all, except with reference to the motor trade.

It is perhaps inevitable in the present state of our knowledge of the various expanding manufactures and of recent developments in the older staple industries that a book which relies for the most part on published and easily accessible data should fail to come up to expectations. Does not this suggest that the assembling of widely scattered but familiar material in an endeavour to arrive at conclusions about British industry in general is at present a less urgent task of the economist than the carrying on of first-hand investigation of industrial change in a narrower field and the maintenance of the closest possible contact with current trends ?

A.W.

The Tyranny of Gold. By W. R. Hiskett. (Williams and Norgate. pp. 100. 2s. 6d.)

The author of this book, which is written in simple and untechnical language, has some pertinent criticisms to make of the present system, and one cannot but admit of the force of these criticisms. He is not content with being purely destructive but has attempted to construct a new system free from the control of gold. While many of the suggestions appear to be ingenious one doubts whether they really differ fundamentally from the orthodox. If the countries of the world were willing to work the Gold Standard in that same spirit that Mr. Hiskett's schemes demand for their success, there would have been no need to write this book. This is the fault of many alternative proposals to the Gold Standard. So long as this feeling of nationalism pervades the countries of the world there can be little progress towards that World Economy that the Gold Standard and many of these other schemes presuppose.

N.R.H.

The Mediæval Mason. An Economic History of English Stone Building in the Later Middle Ages and Early Modern Times. By Douglas Knoop, M.A. and G. P. Jones, M.A. (Manchester University Press. 1933. pp. 294. 12s. 6d. net.)

In the Middle Ages the building industry, even more than mining or the smelting of metals, presented the dominant characteristics of industrial capitalism. Its operations involved a high degree of managerial ability, the assembly of large productive resources at one spot, and the existence of a body of specialised but mobile labour, willing to work for wages. In an apt simile the authors of this book speak of it as standing out from the handicrafts typical of the period " as the towers of a cathedral or the battlements of a castle stand out above the houses huddled about their base."

Church and State provided the capital and administrative skill. How the labour was recruited from quarrymen and others, and how the power of impressment was used to bring it to the required place, are among the most interesting of the many themes discussed. Since few builders could find continuous employment in any one town, the craft gild (associated, as it was, with the municipal economy) played but a small part in the life of the mason ; and apprenticeship was of little importance. An elaborate study of wages brings to light a remarkable uniformity of rates of pay in different

parts of the country, and a wide diversity of remuneration at any one time and place, reflecting different degrees of skill. Wages generally moved up with prices, and the attempts to regulate them by statute, after the Black Death, were largely futile. But the great increase of prices that followed the influx of silver in the sixteenth century forced down the standard of the mason : between 1500 and 1700, according to the valuable index numbers compiled by the authors, real wages fell by about 33 per cent. In the seventeenth century the demand was no longer for cathedrals and castles but for domestic buildings, and this could be satisfied by contractors commanding smaller resources than those of their predecessors. Is it not possible that the fact that wage-earning had become so onerous may also help to explain the rise of small masters in building, as in other occupations ?

Few mediævalists know what is significant to the economist. Few economists have the patience and skill to interpret early records. Professor Knoop and Mr. Jones show a happy conjunction of qualities. Their careful scholarship and historical imagination have produced a work vital to an understanding of the evolution of labour. By this work the series of monographs inaugurated by Unwin is extended into a new territory—one into which Unwin had made many excursions, and which he was eager to see developed by men trained at Manchester.

T.S.A.

REMARKS ON THE RELATIONSHIP BETWEEN ECONOMICS AND PSYCHOLOGY[1]

1. The relationship between Economics and Psychology is not a matter which has ever given rise to much dispute among economists. Indeed, it is not a matter to which economists in general have devoted very much attention. The literature of the subject, such as it is, is largely the work of men who have been ignorant of Economics but anxious, for various reasons, to discredit its conclusions. If one wishes to discover what the great economists have thought on this matter, one must look to their practice and their occasional *obiter dicta*, rather than to any systematic work on the subject.

The reason for this is not far to seek. As I shall argue, there is no very intimate relationship between Economics and Psychology, and no very important propositions depend upon a correct determination of what relationship there is. I have never heard of an economist who was really interested in his job of thinking out new propositions in economic analysis, or of applying analytical knowledge to the elucidation of concrete situations, who was held up in his work by a lack of knowledge of this kind : and I cannot believe that such a one has ever existed. The people who have worried about such matters have had other ends in view.

Nevertheless, there is some justification for the inquiry. For, although, as I shall argue, Economics is almost entirely independent of any particular kind of Psychology, there can be no doubt that it deals in considerations which may be designated as *psychological* (or, more properly, as *psychical*[2]) and the clarification of this distinction may prevent certain misapprehensions and serve to shed new light on the significance of certain accepted propositions. It is with this very limited objective that I venture to present this paper.

[1] The following essay was first read as a paper to a small circle composed chiefly of members who were not professional economists. I have preserved the spoken form in order to make quite clear its very modest pretensions. It in no way aspires to be regarded as a systematic treatment of the subject.

[2] I owe this correction to my friend, Mr. H. W. B. Joseph.

2. My first task is to describe the present status of what I have called the psychological elements in Economics. I can do this best by means of an historical retrospect which, incidentally, will enable me to recall certain matters which will be relevant to the discussion at a later stage.

The central object of economic enquiry—theoretical or applied—is the disposal of scarce goods. Human life is such that the things we want to do (the ends) are incapable of complete realisation, in the time and with the materials (the means) at our disposal. Hence, willy-nilly, we have to chose between one thing and another : and the choice of one thing involves the sacrifice of others. All the characteristic problems of Economics—market price, the rate of interest, the value of money, cyclical fluctuations, etc.—prove, in the last analysis, to have this characteristic in common, that they relate to human activities viewed as a distribution of scarce means between the various objectives of conduct. Theoretical Economics discusses the abstract forms of this distribution ; Applied Economics concrete situations and problems in terms of these general categories. There are different ways of putting this into formal definitions but, at the present day, I do not think that there would be much disagreement regarding the substance of this description.

Such has been the general pre-occupation of Economics since its inception. But, of course, the modes of explanation which have been adopted by different economists have not remained constant. On the contrary, they have undergone what is, broadly speaking, a process of continuous development. One of the main characteristics of the process is the change in the position of the psychological factor.

There is no need, in this connection, for us to linger over the theories of the Physiocrats. It is the eternal fame of Quesnay and his school to have perceived the existence of a certain order and continuity in social activities. As Schumpeter has put it, they discovered the circle of economic activity—the interconnection of economic phenomena. But it cannot be said that they went far to explain it. Quesnay's *Tableau Economique* may be the first description of an economic equilibrium ; but it is schematic rather than explanatory. It indicates one of the formal characteristics of equilibrium—the balance of income and expenditure—but it does nothing to show the nature of the forces which may be held to determine such conditions. And it certainly lays no stress on any psychological factors.

The first system of which we need seriously take account is, of course, the classical system, which is to be found *par excellence* in the works of Ricardo. Here is a body of propositions which was, in the truest sense, both explanatory and systematic. Whatever deficiencies may have been revealed by subsequent discussion, for certain purposes many of its propositions are still almost indispensable.

Now it is sometimes said that the classical system rested essentially upon the assumption of a world of economic men, buying in the cheapest market and selling in the dearest, oblivious of anything but self-regarding considerations. This view rests on misapprehension. For certain purposes, in the first approximation the classics undoubtedly did assume that in market dealings the aim was to maximise money profit. But they never argued that this was necessarily the case. In the second approximation, they developed a doctrine which definitely assumed the contrary: the Smithian doctrine of the tendency to equality, not of money receipts, but of total advantages. And it can be shown that most of their characteristic propositions in this field depended, not on the assumption that the money incentive was *everything*, but merely that the money incentive was *something*—which is surely not an unreasonable assumption when one is investigating the phenomena of the market.

Paradoxically enough, the one psychological assumption which they did make was of an entirely different nature—an assumption which depicted mankind not as a set of passionless calculating machines, but rather as the prey of overwhelming animal instincts, whose evil effects were only to be resisted by institutions and personal habits of the utmost possible austerity. I refer, of course, to the Malthusian Theory of Population. No one has understood the work of the classics who has not appreciated the significance of this generalisation. It explains their attitude to practical questions. It explains, too, the surprising certainty with which, in their most abstract analysis, they pushed through to conclusions which, at first sight, seem almost to have a material rather than a formal significance. It is one of the most characteristic differences between the classical and the modern systems that this doctrine which might, perhaps, with justice, have been described as psychological, has fallen completely out of the picture.

If we leave the Malthusian doctrine on one side, the most striking feature of the classical system is the *absence* of psychological elements. The Malthusian assumptions apart, the main features of the classical

analysis were pre-dominantly *technical* in character. The Law of Diminishing Returns, the Labour Theory of Value, the Theory of Comparative Costs, the Ricardian Theory of Rent—all served the main purpose of explanation by invoking technical concepts : the rate of variation of production, the labour time necessary for production, different degrees of fertility of soil—and so on and so forth. Even the Malthusian Theory in its palmiest days, played its main part in the theory of value and distribution *via* the technical concept of the amount physiologically necessary to secure the maintenance and reproduction of labourers. As is well-known, this was modified later. Subsistence became a psychological minimum. But the main psychological element explicitly assumed in the famous " stationary state " was the indisposition to accummulate below a certain minimum rate of profit. As can be readily seen from Mr. Edelberg's recent re-statement of Ricardo,[1] all the other chief elements of explanation were essentially technical.

Now, of course, it can be argued that many of the propositions of the classical analysis, assumed implicitly those psychological elements and constructions which, in the modern view, would be necessary to make them valid. Professor Knight has shown, for instance, that the celebrated parable of the beaver and the deer which was used by Adam Smith to demonstrate the labour theory of value, needs only to be re-stated in slightly different terms to make it valid in the universe of discourse it postulates.[2] Nevertheless, it is clear that, *as they were stated*, many of the classical propositions omitted to explain what we now see to be, in some respects, the primary conditions of any system of economic relationships, the influences operating on the demand side—the psychological elements in the system. The technical elements, which they stressed, were, no doubt, elements of which account must be taken in any system of analysis. But, taken by themselves, they were insufficient to determine the relationships to whose formulation they helped to contribute.

We can see this quite clearly if we take the example to which I have already alluded. In the Smithian example of the exchange of beaver and deer, it is permissible to concentrate attention on the technical conditions on production only on the assumption that these technical conditions are not variable. If we may assume that it

[1] " The Ricardian Theory of Profits," ECONOMICA, 1933, p. 51 *seq.*

[2] " A suggestion for simplifying the Statement of the General Theory of Price," JOURNAL OF POLITICAL ECONOMY, 1928, p. 353 *seq.*

always takes twice as long to catch a beaver as to kill a deer, then perhaps it is legitimate to neglect the psychological elements determining immediate valuations, etc., and proceed to argue that, in the long run, the ratio of exchange between beavers and deer will be two deer to one beaver. If it were not so, movements would be evoked which would tend to bring it about. But as soon as we drop this assumption—as soon as we assume that the time it takes to kill deer is a function of the number of deer killed, then clearly, unless we know the conditions of demand and the market, the equilibrium point cannot be determined. As there is no reason to assume fixed technical conditions of the kind invoked in the beaver-deer example, to be at all wide-spread, this means that, in the majority of situations, demand conditions cannot be neglected.

But, even if this were not so, exclusive concentration upon technical conditions would be very misleading. It might help us to *describe the conditions of equilibrium*; but it would not help us to explain how equilibrium *could be conceived to be reached.* In order that the technical production ratios may play the part assigned to them in this theory, it is necessary to assume that ratios of exchange—values—actually prevail in the market to guide productive effort. If you assume a random distribution of effort between beaver trapping and deer hunting, there is no reason at all to suppose that the ratio of exchange will be in harmony with the technical displacement costs. It is only when the market mechanism has been allowed to function and the ratio of exchange has enabled the producers to decide which is the best for them to do, that this harmony can be conceived to be established. Now the Labour Theory of Value tells us nothing about the formation of values when the supplies resulting from a random distribution of factors of production are *given.* That clearly is a task which can be performed only by a theory which has taken account of the psychological side of valuation.

It is this shifting of the emphasis of theoretical economics which has been one of the main achievements of the work of the last seventy years. The classical economists had always recognised that, in order to be the object of exchange, a commodity must "have utility"—that is, must be the object of desire on the part of some member of the market. But beyond this they were unable to go. "Possessing utility," a commodity derived its value from the quantity of labour expended on its production, if it were capable of free manufacture; from a mysterious source which was called

its scarcity, if it fell into the class of unproducible things like the pictures of Raphael or the autographs of dead boxers. There was no relation capable of precise explanation between the value of the good and its " utility."

And, of course, so long as the utility of a commodity was conceived as deriving from the *class* of commodities to which it belonged rather than from the precise use to which that particular unit was put, this *impasse* was bound to continue. There is no precise relation between the value of commodities and the " utility " of that class of commodities as a whole, irrespective of the uses to which they are put and the quantity in which they are present. It was not until it was perceived that the individual estimate germane to the determination of economic value, was not the estimate of the class, but the estimate of the significance of the actual use dependent upon the possession of particular units of the commodity, that the development of a value theory taking proper account of psychological elements was possible. Once this was realised, all the old paradoxes of value disappeared and the way was clear for a theory making subjective valuation its main foundation.

It is not necessary for me to plague you with a detailed description of this development. The main idea of marginal utility occurred to many economists working in different places round about the middle of the last century and in at least one case—that of H. H. Gossen—it was made the basis for systematic and extensive developments. But, for various reasons, these early discoveries had little or no effect. The incorporation of the psychological into the general body of accepted economic analysis had to wait until the appearance in the early 'seventies of the works of Jevons, Walras, and Carl Menger. From the work of these three men we must date the origin of the modern renaissance of theoretical economics.

But, in recognising this, it is very important that we should recognise too that their work provided only the beginnings. It is a great mistake to look upon the changes of the 'seventies as definitive and the whole development of the subsequent period as involving either minor refinements or the reintroduction of classical propositions on the supply side. On the contrary, many of the most important innovations since that time—the innovations, for instance, of Pareto and his followers—have consisted in the development of an apparatus capable of handling with much greater efficiency the complications of the psychological elements. To judge the modern economics by the formulations which are to be found in Jevons'

Theory of Political Economy, path breaking as that work was in its day, is to risk falling into a serious misapprehension. Let me explain this in greater detail.

Let me take first the question of psychological foundation, for this is very germane to the question I have to discuss—whether there is any intimate relation between economics and psychological doctrines. It would be an easy thing, on the basis of a superficial inspection of Jevons and some of his English followers, to conclude that analytical economics was nothing more nor less than a series of corrolaries of psychological hedonism. And it would be no far cry from this verdict to conclude that, since, in many quarters, psychological hedonism is regarded as discredited, analytical economics and all that depends upon it must share in the downfall.

The conclusion would be easy. But, in fact, it would rest upon a misapprehension. It is true that in the work of Jevons the marginal utility theory is developed on an avowedly hedonistic basis. It is true, too, that the celebrated Law of Gossen, the law of diminishing marginal utility, was propounded in the guise of a psychological law of satiation. But, in fact if we look at the parallel developments elsewhere, at the work of the early Austrians—Menger or Komorzynski for instance—we find just the same conclusions reached from a starting point which involved a definite repudiation of hedonism. It is no exaggeration to say that you could omit all those passages in Jevons which relate to the calculus of pleasure and pain, without any detriment to the main *economic* argument he is propounding.

Subsequent developments have made this clear. It is quite clear, at the present day, that the significant contribution of Gossen and Jevons was, not their hedonistic calculus, but the fundamental concept of the dependent use (the *abhängige nutzen*), which is quite independent of any hedonistic hypothesis. Gossen's Law in its modern formulation has lost any connection with the idea of satiation and embodies merely the incontestible platitude that, if the different uses of different units of a commodity offer unequal attractions, then they can be ranged in an order of declining importance. This seems to be a conception which is quite independent of any particular doctrine concerning the springs of human action.

It is not only in this respect that the Jevonian constructions have undergone revision and modification : other features have been reconstructed no less drastically. In the early days of the new theory, Jevons and others proceeded on the assumption that the

"utilities" with which they operated were to be regarded as measurable—an assumption which, quite rightly, gave offence to philosophers. As a result of the work of Pareto and the younger Viennese School it has been realised that this assumption is totally superfluous. The theory of value which is to be found in more modern works is based, not on the assumption that utilities are measurable, but simply upon the assumption that they may be compared.[1] In its most remote ramifications, it involves nothing more than the assumption that the economic subject can judge whether the significance of A to him is greater than, equal to, or less than that of B. The Jevonian constructions, furthermore, proceeded on the assumption that the significance of any one commodity could be estimated independently of the amounts and the uses of other commodities : an assumption which, no doubt, had its uses as a first approximation, but which was manifestly insufficient to take account of processes of valuation which, in greater or less degree, take account of the system of ends as a whole. Here, too, the developments of the last thirty years have completely changed the position. It is the main purpose of the elaborate apparatus which has been devised by Pareto and, in more recent years, by Schönfeld and Rosenstein-Rodan, to take account of these and similar complications. Philosophers, who have an ingrained tendency to distrust the mathematical, do a grave injustice to modern developments of analytical economics if they accuse it of losing touch with reality. Paradoxically enough, it is just in order to be in a position to take account of situations of a degree of complication approaching that of the real world that these apparently remote abstractions have been devised.

At the present day, therefore, as a result of this process of development, you have a body of analytical economics which, while not ignoring the classical propositions regarding technique, takes equally into account the psychological elements in the disposition of scarce goods : a body of analysis, to use Pareto's words, which depicts economic phenomena as the inter-play of tastes and obstacles. Whether, recognising the priority, in a certain sense, of demand, we call this a subjective theory ; or whether, attempting to devise a label which takes account of the psychological and technical elements, we call it dualistic, is a matter of words. The actual position is

[1] For the most systematic exposition from this point of view, see the important "Reconsideration of the Theory of Value," by Messrs. Hicks and Allen, ECONOMICA, 1934, pp. 52—76 and pp. 196—219.

substantially as I have depicted it and I venture to suggest, in spite of some local disunity on semi-political questions such as monetary policy, etc., it is accepted by the overwhelming majority of present-day economists.

3. I now come to more controversial issues. As I have just indicated, there are few economists, who, at the present day, would reject any of the main features of the process of development I have outlined. All agree upon the insufficiency of the classical system. All agree on the necessity of taking into account most of the elements which I have called the psychological elements.

But there the unanimity ceases. In recent years, there have arisen voices urging a more austere attitude in regard to these elements. By all means, they say, let us take into account demand and let us do full justice to the complexities of demand in our system of curves and equations. But scientific method demands that we should leave out of account anything which is incapable of direct observation. Valuation is a subjective process and falls outside this region. We must, therefore, commence our analysis at that point at which valuation shows itself in action. Our theoretical constructions must assume observable data. The theory of value must be excluded from the theory of equilibrium.

It would be interesting to trace out in detail the rise of this tendency. Speaking broadly, I think, its origin is two-fold. On the one hand, it springs from the influence of behaviourism : from a desire to be in the fashion—a sure sign of intellectual sterility—or, on the other hand, as in the case of the School of Lausanne, it may spring simply from the aesthetic desire to secure the maximum possible austerity in analytical exposition.

But, whatever the occasion of this tendency, for it to become a general practice would, I am convinced, be a step in a backward direction. This for two reasons. The first is a reason of expositary effectiveness ; whether it be æsthetically pleasing or no, we do, in fact, *understand* terms such as choice, indifference, preference, and the like in terms of inner experience. A theory which explains the pricing process in terms of scales of choice will not be *understood* in terms of externally observed behaviour only. It will, quite inevitably, be linked up with introspective data. To ignore this, or definitely—in the interests of a false imitation of natural science—to attempt to suppress it, seems to me an altogether artificial position. No doubt, introspective data must be handled with especial caution. There are certain modes of procedure, such as the attempt to make quantitative

comparisons, legitimate enough in the natural sciences, which are clearly illegitimate in this field. But, because some economists and some psychologists have exceeded what is methodologically permissible, to rule it out altogether seems to be a form of teetotalism inappropriate in scientific enquiry.

And in fact—and this is my second reason—when we come to look more closely at the assumptions of our analysis, we find, not only that it is inconvenient to treat these psychological elements as if they could all be observed from outside, but that, actually, it would be impossible to do so if we wish to explain the phenomena we set out to analyse. This is obvious as soon as it is stated specifically. It is clear that the most elementary process of price determination must depend *inter alia* upon what people think is going to happen to prices in the near future. Demand, that is to say, must be conceived not merely as a function of a set of prices which might be assumed to prevail now—and thus afford the data for external observation—but also of a whole series of prices which people expect to prevail in the future. Such elements are not susceptible of external observation. Yet as Knight and others have shown, it is absolutely indispensable to take them into account if we are to understand at all the mechanics of economic change. It is quite easy to exhibit such elements as part of a general system of scales of preference.[1] But it is absurd to pretend that, in such circumstances, we take account only of observable data. How can we observe what a man thinks is going to happen?

4. If these considerations are correct, then it follows that there can be no question of excluding from economics its psychological elements. But it should be clear from what I have said already that the inclusion of such elements does not involve any close relation with systematic psychology. The elements in question are conceived in a purely formal manner. We make no assumption concerning their necessary content and, consequently, our conclusions are independent of the truth or falsehood of scientific doctrines which profess to explain this content. To explain why this man, in these circumstances, prefers fish to flesh ; and that man flesh to fish ; why to one love is more important than hunger and to another hunger than love—these are questions which, presumably, would be regarded by the psychologist as falling within his province. For the economist

[1] For an exact exposition of this procedure see Hicks, *Gleichgewicht und Konjunctur* Zeitschrift für Nationalökonomie, Bd. iv., pp. 441—455.

it is sufficient to assume that such preferences exist : his task is to examine their implications as regards the disposal of scarce goods.

But, it may be asked, when we descend from these austere regions of pure theory and investigate the disposal of particular scarce goods, in particular situations, are we not, in fact, making psychological investigations ? Here again, the answer runs in terms of our former distinction. If we are attempting to ascertain the conditions of demand for fish in a particular market at a particular time we are indeed investigating psychological data. But we are not investigating them from the point of view of the psychologist. He wishes, presumably, to know why these things exist and to what law of psychic equilibrium, or psychic genetics they conform. We, on the contrary, wish to know simply *that* they exist in order to discover, in our own field according to the laws of our own science, what are the implications of such existence.

But will not psychology assist us to discover such particular valuations—to say in *these* markets at *these* prices we shall discover fish to be preferred to flesh ? It certainly has not done so in the past. Much as has been said by psychologists about the relevance of their studies to economics (and much has been said in their defence by economists with a livelier interest in other things). I have yet to meet the economist who used a text-book of psychology to assist him in investigations of this nature. And, on general grounds, I find it difficult to conceive development on these lines in the future. In recent years economists have done much work in the field of market analysis. An incredible deal of time and apparatus has been devoted to analysis of elasticity of demand for various products. If any significant psychological laws were to emerge in this field they would be much more likely to have emerged as a result of the efforts of economists than as a result of anything done by psychologists. Yet by now it is clear—it was quite clear to many of us from the outset—that such investigations can never lead to anything deserving the title of statistical laws. This is not in the least to minimise their importance, they do provide a rough basis for limited price predictions, in the area of collection, other things not changing greatly. But, in the last analysis, they provide not scientific laws at all but a particular way of writing history.

5. But finally, it may be asked, do not the generalisations of economics depend essentially upon a more general psychological assumption—upon the assumption of rationality ? Is it not correct

to describe the subject-matter of economics as the *rational* disposal of goods? And in this sense, cannot economics be said to depend upon another, and more contentious, kind of psychological assumption than any we have yet examined? This is a matter of some intricacy which deserves attention, not only for its own sake, but for the light it throws upon the methods of economics in general.

Now, in so far as the idea of rational action involves the idea of ethically appropriate action, and I think it is sometimes used in this sense in everyday discussion, it may be said at once that no such assumption enters into economic analysis. Economic analysis is "Wertfree" in the Weber sense.[1] The values of which it takes account are individual valuations. The question whether, in any further sense, they are valuable valuations is not one which enters into its scope. If the word rationality is to be construed as in any way implying this meaning, then it may be said that the concept for which it stands does not enter into economics.

But, in so far as "rational" is taken to mean merely "consistent," then it is true that an assumption of this sort does enter into certain analytical constructions. The celebrated generalisation that, in a state of perfect equilibrium, the marginal significance of divisible commodities is proportionate to their price, does involve the assumption that each final choice is consistent with every other, in the sense that if I prefer A to B and B to C, I also prefer A to C, and so on, that in a state of perfect equilibrium, internal arbitrage operations are excluded.

There is a wider sense, too, in which the conception of rationality can be understood as figuring in the discussions of the conditions of equilibrium. It may be irrational to be completely consistent as between commodities, in the sense I have described, just because the time and attention which such exact comparisons require are (in the opinion of the economic subject concerned) better spent in other

[1] This proposition has been much questioned in recent years by certain English-speaking economists. But they have not yet shown that propositions involving "ought" are on the same logical footing as propositions involving "is." And, indeed, on examination, all their objections seem to resolve themselves into a fear that, if the scope of economics is thus defined, they may be precluded from discussing problems of social improvement from a normative point of view. But this apprehension is groundless. Nobody wishes to limit their freedom of action. Most of us think that it is very desirable that they should discuss such matters. All that is desired is that the logical division between the two types of propositions mentioned above should be clearly recognised. No one wishes to prevent a mathematician from discussing problems of good and evil. But he may bring the multiplication table into unnecessary discredit if he suggested that his views on ethics have the same logical sanction.

ways. The marginal utility of not bothering about marginal utility is a fact of which account has been taken by all the chief writers on the subjective theory of value, from Böhm-Bawerk onwards. It is really not a recent discovery. It can be taken into account in a perfectly formal sense by permitting a certain margin (or a certain structure of margins) of inconsistency between particular valuations —the opportunity costs of internal arbitrage.

It is perfectly true that the assumption of rationality figures in constructions of this sort. But it is not true that the subject-matter of economics is limited to consistent action. Means may be scarce in relation to ends, even though the ends be inconsistent. Exchange, production, fluctuation—all take place in a world in which people do not know the full implications of what they are doing. Indeed, it is only in terms of irrational choice, that many of the more complex situations which economics has to study can be explained. The niggardliness of nature does not constrain only the actions of the wise.

The fact is, of course, that the assumption of rationality is simply one of a number of assumptions of a psychological nature which are introduced into economic analysis at various stages of approximation to reality. The perfect foresight, which it is sometimes convenient to postulate, is an assumption of a similar nature. The purpose of these assumptions is not to foster the belief that the world of reality corresponds to the constructions in which they figure but rather to enable us to study, in isolation, tendencies which, in the world of reality, operate only in conjunction with many others and then, by contrast as much as by comparison, to turn back to apply the knowledge thus gained to the explanation of more complicated situations. In this respect, as in so many others, the procedure of pure economics has its counterpart in the procedure of all natural sciences which have gone beyond the stage of collection and classification.

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The London School of Economics,
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SPENDING AND INVESTING

In this article an attempt will be made to expound somewhat more fully the meaning and some of the implications of the terms spending and investing as these terms were used in an article in an earlier issue of this Journal.[1] Clearly, both the terms have reference to money and its active use, but, if spending and investing are different uses, it seems advisable that the difference should be recognised in thought, and observed when the terms appear in discussions on economic questions. When money comes into the possession of a person he may, of course, withhold it from active use as, for example, by keeping it idle in his pocket, or by placing it in a bank merely for safe-keeping, without any intention on his part that it shall be actively used. If, however, he decides to put the money to active use he can do so in one of two ways. He can so use the money that in exchange for it he receives a supply of final commodities or services, meaning by these, commodities or services which he and maybe others to whom he gives the right intend to consume themselves. It is when money is so actively used that spending seems to be the most appropriate term to denote its use. It is this spending which makes possible that consumption which is the aim and end of production.

This person may, however, desire to put the money in his possession to active use in the other of the two ways which are open to him. If he does so, he will again receive in exchange for his money something, or a claim on something which, in this case, is not to him a final commodity or service which he intends for his own consumption though, in its present form, say, loaves of bread, it may be a final commodity or service to someone else who will spend his money in order to obtain it for his consumption. At the other extreme, what the person may receive in exchange for his money is, say, a plough for use in a field where wheat is grown from which bread is made, or it may be that all he receives is a piece of paper which entitles him to a share in the profits of a business concern and ultimately in the things which constitute its assets. Whatever the thing may be which the person receives in exchange for his money, its essential feature is that it is not a final commodity or service which he intends for his own consumption. The reason why the person exchanges his money for the thing is that he anticipates that the thing will yield him a

[1] Vol. IV., No. 1.

further supply of money which, if he so chooses, he can use again in the same way, or spend on final commodities and services for his own consumption. It is when money is actively used in the way indicated in this paragraph that investing seems to be the most appropriate term to denote its use. While spending makes possible that consumption which is the aim and end of production, investing makes possible production as it is generally carried on in advanced economic communities.

But that exchange of money which is here called investing requires closer investigation. When a person so invests, the types of concrete things which he may receive in exchange have just been indicated. On the other hand, in return for his investment, he may receive services which do not find concrete expression. If the investment is in, say, the services of a number of vocalists, these services have yet to be performed and, moreover, when the performance takes place they are simultaneously consumed by those to whom they are final services. Evidently, in this case, the investment represents the earnings of the performers, and what is spent by the consumers of the services represents the return to the investor, which return, if the investment is to be profitable, must be larger than the investment in the services of the performers, the excess representing the earnings of the investor. If we make the assumptions that the performers and the consumers are the same people, and that their earnings are spent on the services, the return to the investor is exactly the amount of his investment, but there is no excess, and the investment is not profitable. If, however, we regard the investor as a producer, and also as a consumer, as indeed we must, and think of his spending an amount appropriate to his earnings on the services, then there will be an excess, and the investment will be profitable. Under these simple conditions it is reasonable to suppose that the process of investing, producing, and spending, would continue without interruption or dislocation. In thinking of the existing economic system, where the conditions are immensely more complicated, but where the process of investing, producing, and spending still operates, though not without interruption and dislocation, it is helpful to keep these simple conditions in mind.

The reason why the above conditions can be stated so simply is that it is assumed that producing consists entirely of the performance of direct and final services which disappear with their performance. Even if we keep this assumption, the conditions will become more complicated if we suppose that the services are performed by several

groups of vocalists, the members of which do not spend their earnings on and consume their own services but are free to spend them on and consume the services of other groups. With this complication, however, it is still possible that the situation might work out as under the simple conditions, the requirement being that all the services performed by the several groups shall be suitable in the sense that the producers as consumers will be induced to spend their earnings on them in the right proportions. If this requirement is not complied with, the situation might be that while the returns to the investors in some of the groups are unprofitable, or not sufficiently profitable, in others they may be extra profitable. Evidently under a system in which free spending is allowed there can be no guarantee that the requirement will be present ; the guarantee necessitates that wherever services are performed the earnings of the producers as consumers must be spent in such proportions on the various services that the investments will everywhere continue profitable. With a maintenance of free spending the remedy for a departure from these proportions will be a re-adjustment of investments and services among the groups according to their profitability. Such re-adjustment will, of course, involve some disturbance with a probable temporary loss, and it may be taken for granted that those immediately concerned will desire that the situation be met in some other way. If an effective appeal can be made to external authority, whatever the action taken, it will almost certainly resolve itself into at least an indirect interference with free spending, with consequent reactions involving further re-adjustments and, presumably, from the point of view of consumers, a less appropriate supply.

So far nothing has been said of how the money required in the above process comes into existence and the question need not be considered at this stage. Assuming it exists in convenient quantity and denominations the essential condition of the continuance of the process is that there shall be a continuous return to investors sufficient to induce them continuously to renew their investments. Seeing, however, that the prices of the services produced will be expressed in terms of this money, it is evident that the average of these prices will depend upon the quantity of money which accrues as earnings, and which is spent on the services, in relation to the quantity of services produced and purchased : if the quantity of money is relatively larger the average of the prices will be higher, if the quantity is relatively smaller the average will be lower. But, provided that the essential condition of the continuance of the

process is present, and that the quantity of money meets the requirement of convenience, there seems to be no reason why a higher or a lower average of prices than that which exists at a particular time should be more conducive to an interruption or dislocation of the process. If with any average of prices the essential condition of a continuous renewal of investment for an investor has disappeared the basic remedy is such adjustments as will cause the essential condition to re-appear.

This is not less true in the highly complicated conditions of the existing economic system than it is in a system where the conditions are much less complicated. Under the former conditions, while part of the production still consists of direct and final services which are consumed as they are produced, the greater part consists of services which find concrete expression in commodities and in capital aids to their production, in buildings, tools, machinery, means of transport, and so on. These services are not consumed as they are produced, but they are intended for consumers, and it is expected that ultimately they will result in final commodities on which consumers will spend money in such amounts that the investments in the services will yield a profitable return to the investors.

Here, however, the question of investment and a profitable return is much more complicated than when production consists entirely of the performance of direct and final services. The dominant principle underlying the organisation of the existing economic system is the principle of specialisation, and the complete process of production of the types of concrete things mentioned above usually consists of a series of stages in which many distinct industrial and commercial concerns may be involved. The complete process of production of commodities begins with services performed in conjunction with natural resources and ends when as final commodities they are in possession of their consumers. The makers of the ploughs for use in the wheat fields, and the makers of all the other capital aids utilised, along with the farmers, the millers, the bakers, and the retailers who hand the bread as a final commodity over the counter to consumers, have all to be regarded as engaged in the complete process of production of bread, and ultimately it is from the money expended by these consumers on the bread that the returns on the several investments involved in the process must be derived. If, in order to simplify the position, we conceive of the complete process of production of bread to consist of the stages indicated, and suppose that consumers spend money on bread to the amount of £50 a week,

this is evidently the amount that the retailers will receive. But it is not a net amount to the retailers; against it there is a debit of, say, £30 to the bakers; and against this a debit of, say, £20 to the millers; and against this a debit of, say, £10 to the farmers at which point we may stop. The net amounts are thus £20 to the retailers and £10 each to the bakers, the millers, and the farmers. These amounts represent the returns on the investments made which, if they are profitable, include the earnings of those who have performed services, and appropriate amounts for depreciation of the capital aids utilised in the complete process of production of the bread.

Although this case is more complicated than the one given above, in which it was said that the process of investing, producing, and spending might continue without interruption or dislocation, it is apparent that, if the required conditions are continuously fulfilled, a similar statement need not be inapplicable here. The position is that each week a quantity of bread is produced which requires net investments of £50 weekly, which amount constitutes the earnings of those who perform services in the complete process of production of the bread, and which, if the investments are to be profitable, must be spent by the producers as consumers on the bread and accrue to the investors in the required proportions. In this process the investors must be regarded as investing in their own services that portion of the £50 which constitutes their earnings, the amount which accrues for depreciation of capital aids being accounted for by the consideration that an unimpaired continuance of the process implies investment in services which make good the depreciation. These services, like the other services, in whichever stage they are performed, are a part of the complete process of production of the bread. To come nearer to the actual conditions of the existing economic system it is necessary to remember the immense multitude of final commodities which are produced, and to bear in mind that in no single instance are those who spend their earnings on them likely to be exactly the same as those who have performed the services which have produced them. But the condition still holds that, if the process of investing, producing, and spending is everywhere to continue without interruption or dislocation, the earnings of the producers as consumers must be spent on the various commodities and distributed among the stages of their production in such proportions that the investments involved will everywhere continue profitable.

At this point another complication must be taken into account which arises from the fact that, in the process of production as it is

usually carried on, capital aids of the types already mentioned are largely utilised. The existence of these capital aids implies investments in the services which have produced them. Whether investments in services which produce new and additional capital aids will be ultimately profitable depends on whether, when they are brought into use and play their part in the process of producing final commodities, consumers spend an amount of money on these commodities which will make the investments in the services embodied in these capital aids, and in the other services required in the process, profitable. Supposing this general condition is always and everywhere present, there seems to be no reason why the production and the coming into use of new and additional capital aids should prevent the process of investing, producing, and spending, as before described, continuing without interruption or dislocation. For the condition to be present requires that when investment in the services which produce the new and additional capital aids is proceeding, the returns to the investments which result in the current flow of final commodities continue profitable, and similarly when the capital aids come into use. Investments in the services which produce the new and additional capital aids must therefore proceed by an appropriate amount of the earnings of the producers of the current flow of final commodities being diverted into these investments, where they become the earnings of the producers of the new and additional capital aids, which earnings must be spent by them on the final commodities left available owing to the diversion. With continuous investment in the services which produce new and additional capital aids thus proceeding, it is possible to conceive of a continuous production of these aids, and of their continuous entry into the process of producing final commodities, with the general condition of the profitability of investments always and everywhere maintained.

Evidently, given sufficient adaptability for the required adjustments, the process of investing in new and additional capital aids indicated in the above paragraph does not necessarily imply any change in the quantity of money involved in the process of investing, producing, and spending. As the new and additional capital aids come into use, however, it may be assumed that the quantity of final commodities produced in a given time will increase[1] and, supposing

[1]It may be, of course, that the increase would be seen not in the quantity of final commodities but in the quantity of final services or in the quantities of both. Moreover, instead of an increase in quantity there might be a change in the character of the final commodities or services. Just here, however, the discussion may be continued in terms of quantity of final commodities.

a fixed quantity of money, circulating as hitherto described, it follows that the average of the prices of these final commodities must fall. Moreover, as the services embodied in the capital aids increase, it appears that there must also be an appropriate fall in the money earnings per unit of at least some of the pre-existing services. Even so, on the assumption that the system as a whole was yielding larger earnings in the form of final commodities, increased earnings, in terms of these commodities, for each unit of service, would not be inconsistent with a general fall of money earnings per unit of service.

An assumption in this reasoning is that the money involved in the process remains a fixed quantity, while the services involved increase, and it may be objected that, of the two, a change in the quantity of money is the more likely. Under the conditions of the argument this may be doubted but, in order not to ignore the objection, it may be noticed that, with the assumption, the ultimate effect of an increase of services on the money earnings per unit of service and on the average of the prices of final commodities would be essentially the same as if the services had remained unchanged and the quantity of money had decreased; and that, similarly, the ultimate effect of a decrease of services on these money earnings and on the average of the prices would be essentially the same as if the services had remained unchanged and the quantity of money had increased. In all the cases adjustments would be required which would necessitate a high degree of adaptability in the system. To the extent that this adaptability was not present, the general condition of the profitability of investments would be jeopardised, and consequently the continuance without interruption or dislocation of the process of investing, producing, and spending.

The implication of the whole of this discussion is that there is no theoretical difficulty in conceiving of the process of investing, producing, and spending continuing without interruption or dislocation provided that certain conditions are present. The central condition is that investments shall continue sufficiently profitable to induce investors continuously to renew them. The fulfilment of this condition does not mean that investments must not extend, or that their directions must not change, or that investors must always be the same people, or that the services and the money involved in the process must remain fixed quantities, or that the average of prices must continue unchanged. What it does mean is that the investments in the services which produce the multitude of supplies of final commodities and services must be covered by the spending of

money in the right amounts and proportions on these supplies of final commodities and services. That such spending is possible is seen in the consideration that the money earnings of those who perform the services, including the investors, are only another name for the investments.

That in the complicated conditions of the existing economic system the process of investment is not often so direct as this discussion would suggest, and that changes in the quantity of money are not simple increases or decreases of the quantity, whose effects are a proportionate raising or lowering of existing money earnings and prices, goes without saying. Investment, especially new and additional investment on a large scale, usually involves the performance of a range of specialised services in connection with financial concerns and institutions whose sphere of activity is the capital market, and decisions made there largely influence the direction of investments. On the other hand, the money in question is not simple money, although it has a basis of legal-tender money. Mainly, it is credit-money, for whose use there are charges, and whose expansion and contraction are normally governed by the banks which deal in this money making alterations in these charges. It is impossible here to trace in detail the modifications of the process of investment introduced by these considerations nor is it necessary to this discussion to do so. In so far as banks are merely places where earnings are temporarily deposited before being invested, and the other concerns and institutions intermediaries through which earnings are directed into investments, the process of investment is not essentially different from when it is more direct. Actually, it is probable that the greater proportion of the large investments in services which find embodiment in capital aids proceed as is here suggested, the services performed by the intermediaries belonging to the complete process of production of the relevant final commodities and services.

But the view of banks as places where people temporarily deposit earnings before passing them into investment requires large extension. Banks are not merely passive recipients of deposits; while these are in their charge they are utilised by them in a small number of fairly well defined ways which, however, ramify through the whole range of economic activity. What the banks do is to place that part of the deposits which they do not directly invest themselves at the disposal of investors, with the limitation, especially in this country, that generally the deposits cannot become investments in

services which are embodied in such concrete forms that the returns on the investments can be yielded only over a long period of time. This limitation is, of course, imposed by the condition of liquidity which ultimately resolves itself into a question of the quantity of legal-tender money available in relation to the anticipated demand for it by those entitled to claim it from the banks. It is when banks so use the earnings deposited with them that credit-money is issued for whose use charges are made, and, as in other cases, higher charges will ordinarily tend to decrease the quantity of this credit-money in use, and lower charges ordinarily tend to increase it.

Apparently, therefore, even when the activities of banks are taken into account it is conceivable that, by appropriate regulation of the charges, the money available in the economic system might be increased or decreased or maintained in fixed quantity. For the money available to continue in fixed quantity means that the quantity of credit-money issued by the banks in a given time must be equal to the quantity of incoming deposits ; for the quantity of money available to increase or decrease means that the quantity of credit-money issued by the banks in a given time must be greater in the first case and less in the second case than the quantity of incoming deposits. From this it follows that not merely is the presence of banks no necessary obstacle to the continuance of the process of investing, producing, and spending without interruption or dislocation : by issues of credit-money banks may offset the actions of those who have refrained from spending or investing their earnings, choosing rather to deposit them in banks with no intention or with only a tacit understanding on their part that they shall be actively used. Given an economic system in which the process of investing, producing, and spending would continue without interruption or dislocation, provided that the money available was maintained in fixed quantity, it is an obvious deduction that banks should seek to make such charges for the use of credit-money that, in a given time, the quantity of this money issued would be equal to the quantity of incoming deposits.

Supposing, however, that the above provision was not permanently valid, and that it was foreseen that serious dislocation of the process of investing, producing and spending could be averted only if the charges for the use of credit-money were so changed that, in a given time, the quantity of credit-money issued would be less than the quantity of incoming deposits. Then, as indicated above, for the same quantity of services, resulting in the same quantity of

production, adjustment to a lower average of money earnings and of prices would be required. Under the best of actual conditions the adjustment would take time and, if in the system commitments had been entered into as regards money earnings and prices, and where such commitments did not exist the necessity for changes in money earnings and prices was not immediately recognised and acted upon, it is evident that there might be at least a partial interruption of the process of investing, producing, and spending. Until the adjustment was effected, the profitability of investments in certain services might so decline that investments in them might cease, incoming deposits and the issue of credit-money might decline more than the alteration in the charges for this money would itself warrant, and there would be the spectacle of unemployed services. If resistance to the required adjustment were so strong that it could not be effected, a complete restoration of the former process of investing, producing, and spending would be impossible and, in the absence of other developments, the situation would have to continue. On the other hand, supposing that the threatened dislocation had been avoided, and that potentially everything else was the same as before, the remedy for the situation would obviously be an increase in the quantity of money available in the system, which would require that the banks again alter their charges for the use of credit-money to the extent that an adequate quantity of money was available. This case has some significance in that it serves to indicate the sort of conditions under which, on the one hand, the action of banks would appear to be the cause of an interruption of the process of investing, producing, and spending and, on the other hand, the remedy for such an interruption, while, actually, the basic cause was a threatened dislocation of the process, and the basic remedy was its disappearance.

The reactions which might be expected if, when the provision of a fixed quantity of money available in the system was still valid, banks so altered their charges for the use of credit-money that, in a given time, the quantity of this money issued was greater than the quantity of incoming deposits can again, in the first instance, be simply stated. For the same quantity of services, resulting in the same quantity of production, the required adjustment would be to a higher average of money earnings and of prices. In this case an immediate effect of the alteration would be that the present investments in services would become more profitable, firstly because the total charge for the same quantity of credit-money would be less than before, and

secondly because of a probable change in the distribution of money earnings. With this change there could be no guarantee that these earnings would be distributed in spending exactly as they were before, with the possible result that, even in this case, some of the present investments might cease to be sufficiently profitable to induce investors to renew them. Apparently this might involve some interruption of the process of investing, producing, and spending, but, under the assumed conditions, the situation would not seem inherently difficult, and it might reasonably be expected that, in a short time, the required adjustment would be satisfactorily accomplished.

The conditions assumed in this case are, however, excessively simple, in particular, because an extremely probable large reaction has not been taken into account. As already mentioned, an immediate effect of the suggested alteration of the charges for the use of credit-money would be that the present investments in services would become more profitable. Consequently there would be an inducement to investors whose means of investment had been increased to add to the quantity of services in which they invested, including in these services those embodied in capital aids. If we assume that unemployed services are available, there is no difficulty in seeing how the addition could be made, and in a system in which capital aids were used in production, and provided that those already existing were fully utilised, it seems evident that, at first, there would be a strong tendency for the additional investments to be in services which produce such aids.[1] Simply, the situation can be visualised

[1]This statement will not be taken to imply an unreserved acceptance of the view that, when the charges for the use of credit-money are reduced, the bulk of the additional issue of this money will be invested in services which result in additional capital aids, on the ground that the longer-lived are capital aids, and the greater their distance from consumption, the more the value of such aids will be affected by the reduction of the charges. If the charge for credit-money were reduced, and assuming the reduction were expected to continue, it is no doubt true that the money value of investments in services embodied in existing long-lived capital aids would rise, provided, of course, that at least the present money return on the investments were guaranteed. No amount of transfer of these investments from their present holders to others would, however, in itself, alter present investments in the sense of adding to them, nor would the transfers necessarily alter the amount of money which might be used in additional investments. The directions of the additional investments made possible by the increased issue of credit-money would be sorted out according to the criterion of profitability and, to investors, profitability is a question of the difference between money investments in services, including services which have become embodied in tangible forms, and the money obtained for the product of the services. Within the limit of the increase issue of credit-money, and in the presence of other conditions relating to existing capital aids and to the money earnings of services, it does not seem certain that profitability would necessarily be greater in the earlier than in the later stages of the complete process of production.

as one in which the additional credit-money issued is first invested in these services, thus becoming money earnings which are then spent on the as yet unenlarged supply of final commodities and services. Consequently, for a time at any rate, the profitability of investments in the services which produce this supply would be increased, with the further likely consequence of an enlarged demand for these services, and an intensification of the demand for capital aids for use in conjunction with them. Meanwhile, it may be supposed that, because of demands for increased money earnings, the quantity of money investment per unit of service would also be increasing, which means that, unless the quantity of credit-money issued were still further increased, without increase in the charges for its use, which is contrary to what might be expected, the profitability of investments in services including those which become embodied in capital aids would tend to decline to a level relevant to the situation as modified under the impulse of the additional issue of credit money. If, before this issue, investments were profitable, it is only on the assumption that new investments and changes of investments made in consequence of the issue are appropriate, in the sense that they too will be profitable, and this cannot be known of the investments which have resulted in new capital aids until these aids come into use, that it can be said that the requisite conditions for a continuance of the enlarged process of investing, producing, and spending without interruption or dislocation are completely present.

In the first and simpler statement of the reactions consequent upon an increase in the quantity of credit-money issued it was said that an adjustment to a higher average of money earnings and of prices would be required. When the statement is extended as in the above paragraph it will be noticed that ultimately, provided there is a limit to the increase in the quantity of credit-money issued, neither of the averages may be higher than it was before; conceivably both of them may be lower. This result would, of course, be consequent upon an increase in both the quantity of services employed, and in the quantity of production, and the result would not be inconsistent with increased earnings per unit of service in terms of final commodities and services. To speak of an increase in the quantity of services employed does not, however, necessarily imply that, if before the increase in the quantity of credit-money issued there were unemployed services, there would now be no unemployed services. It might be, indeed, that, when the requisite conditions for a continuance of the enlarged process of investing,

producing, and spending had been attained, the quantity of services employed would be less than during the transition to these conditions. In particular there is no guarantee that the whole of the services which had been engaged in producing the additional capital aids would be required for the maintenance and replacement of these aids, or that, at the adjusted level of money earnings, they would be transferred to other stages in the complete process of production of final commodities and services. One obvious way in which the services might be employed without direct danger to the continuance of the process of investing, producing, and spending, would be for sufficient continuous additions to be made to capital aids, investments in the services proceeding as stated earlier,[1] but there is the indirect danger that, as the capital aids came into use, continuous adjustments of the character already described would be necessary. Another, and maybe a more appropriate way, in that these adjustments would not be necessary, would be for those concerned to engage in the performance of such direct and final services as would not involve investments, on which services a portion of the earnings whose spending on final commodities and services is required for the continuance of the process of investing, producing, and spending, might first be spent. These earnings would thus become the earnings of those who performed the direct and final services whence they would be available for spending according to the requirement. With this way open, however, there could be no guarantee that there would be no unemployed services for, as in all other instances, this guarantee requires that the services must be appropriate in the sense that the money which will be spent on them must be sufficient to call forth their performance.

In view of what has been said of the position if, when banks so altered their charges that there would be an increase in the quantity of credit-money issued, there were unemployed services available in which investments could be made, only a very brief consideration is necessary of the position if, with a similar alteration, there were no unemployed services available. In this case it is more evident than in the other that, at first, and for similar reasons, the additional money investments made possible by the alteration would be pre-eminently in services which resulted in additional capital aids. In the other case, however, production of additional capital aids would not necessarily involve any transfer of employed services from any of the stages of current production but, in the present case, such transfer would necessarily be involved. The

[1] Page 106.

transfer would, presumably, require the offer of increased money earnings for the services, which would further mean, other things remaining the same, that the quantity of money investment per unit of service would at once increase. Furthermore, seeing that because of the transfer of services the quantity of final commodities and services currently produced would tend to decline and that, owing to this fact, strongly supplemented by the increase in the quantity of money available for spending, the average of prices would be tending to rise, it may be expected that increased money earnings and increased quantity of money investment per unit of service would quickly be seen in all the stages of the complete process of production. Indeed, under the circumstances, it is probable that for a time, an increased amount of money earnings would be diverted into investment in services producing capital aids, thus further increasing the money earnings of these services, and the quantity of money investment per unit of service. Evidently, if this diversion did take place, although the money earnings of the services were increasing, earnings in terms of final commodities and services might be decreasing. Apparently a movement of the character here described could not continue indefinitely, especially when the check of increased charges for the use of additional credit money is taken into account. When the movement due to the impulse of the additional issue of credit-money ceased, it might be, of course, that, with the increase of capital aids and other changes, the quantity of final commodities and services produced would be larger than before, and the earnings per unit of service in terms of these commodities and services also larger. But again, in this case, if before the additional issue of credit-money investments were profitable, it is only on the assumption that new investments and changes of investments made in consequence of this issue are appropriate, in the sense that they too will be profitable, that it can be said that the requisite conditions for a continuance of the enlarged process of investing, producing, and spending without interruption or dislocation are completely present. Moreover it is again conceivable that, at the adjusted level of money earnings, there would now be unemployed services and, if so, the remarks made above are applicable as regards their employment.

Throughout this discussion it has been assumed that we have been concerned with the process of investing, producing, and spending within an economic system which was immune from external influences. Investing has been taken to mean the investment of

money in services, which money becomes the earnings of the services, and which services result in a continuous flow of final commodities and services. For the maintenance of the volume of this flow, some of the services must be continuously engaged in the maintenance or replacement of the capital aids utilised, and other of the services may be engaged in producing additional capital aids, which are expected when they come into use to enlarge the volume of the flow or to enhance its quality. The central condition of a continuance of the process of investing, producing, and spending without interruption or dislocation is that investments shall be sufficiently profitable to induce investors continuously to renew them. The fulfilment of this condition requires that the constituents of the flow of final commodities and services shall be such as will ensure that the money earnings of the services which result in the flow shall be spent on these constituents in the requisite proportions, and also that they shall be distributed in the requisite proportions among the several stages of the complete process of production. If the money earnings are not thus spent and distributed, there must be some interruption or dislocation of the process, which will be more or less serious according to the extent in breadth and depth that the profitability of investments is affected, and to the time needed for the required re-adjustment of investments, which re-adjustment may mean that some lines of investment have to be discarded, other lines contracted or expanded, and maybe new lines discovered and utilised.

This statement implies that the cause of the situation indicated therein may be regarded as either that money spending has ceased to be appropriate to money investments or that money investments have ceased to be appropriate to money spending. The view that interruption or dislocation of the process of investing, producing, and spending may be caused or remedied by alterations in the quantity of money available in the system implies that there would be the requisite coincidence between money investments and money spending if the quantity of money available had not been or were now altered and, as has been recognised in this discussion, there is a theoretical possibility that such might be the case. But, even if it is further recognised that in any serious interruption or dislocation of the process of investing, producing, and spending, alterations in the quantity of money available would almost certainly be involved, this does not carry the implication that these alterations must be the basic cause of the situation or that they can be its basic remedy. Instead of the alterations being a cause of interruption or dislocation,

they may be an effect, and instead of their being a remedy, they may be an accentuation. If, as has been repeatedly stated in this discussion, interruption of the process of investing, producing, and spending is indication of a lack of coincidence between money investments and money spending, there is surely ample justification for the statement that the post-war dislocation of the world economic system is emphatic indication that such coincidence as formerly existed there has been partly destroyed. To deny that the money factor has been involved in this dislocation would be absurd. Even so, in view of the existence of nationalist forces, which invariably operate strongly in post-war periods, it is hard to believe that this factor has been the basic cause of the dislocation in the sense that, had it not been present, the former coincidence between money investments and money spending would have been maintained. Nor, under these conditions, can the money factor be regarded as the basic remedy for the dislocation. Rather, this remedy has to be sought in such re-adjustment of investments as will assist towards the establishment of a new coincidence, alterations in the quantity of money available in the system being left as cause, and as remedy, in subordinate capacity.

G. W. Daniels

SOME NOTES ON A CENSUS OF DISTRIBUTION

ENQUIRY into the problems of retail distribution is at last beginning to be made but very little has yet been published as to the results of this enquiry. The need for a census of distribution, similar to the census of production has long been felt by the more thoughtful retailer and by students of economics. A voluntary organisation has been set up to prepare the ground for such a census. It is in the main supported by the larger departmental stores and amongst the trade organisations by the Association of Retail Distributors, which is representative of these stores. The more conservative traders of the National Chamber of Trade, which is largely representative of the smaller shopkeeper, are lukewarm in their support and are inclined to look upon the census as a scheme put forward by the larger stores to limit the number of shops. However, the student of economics can only welcome such a census as it cannot but throw light on problems which are at present merely the object of conjecture.

Mr. Marquis is reported to have said recently : " It appears to me almost inevitable that the Government of the country will come to play a larger part in regulating and controlling general trade, and if I am right in this, it is certain that the time will come when it will want to know a good deal more than it now knows about the organisation of the distributive trade. The truth is that no one can tell it."

Whatever the Government's object be, it will certainly require much more information about the trade than it now possesses, whether that object be to limit the number of shops which may be set up, as has been advocated by Mr. Neal and others, or to control the power of the larger stores and the multiple store organisations, as has been attempted in Germany, Italy, and now in France. An Irish Government Commission has recently issued a report recommending compulsory registration of all shops.

When such an elementary fact as the number of shops in the country can, as at present, only be guessed at, the necessity for a census of distribution is immediately apparent. Unfortunately,

the progress which the census is making, is slow. Actually, the scope of the census and the contents of the schedules have yet to be considered by the organisation which has been set up to prepare the way for the census. But some idea as to the form which the census might take, may be drawn from those which have been made in the U.S.A., and from the Census of Merchandising and Service Establishments made by the Canadian Bureau of Statistics in 1930.

For the census to be successful it would, of course, have to be held by the Government throughout the whole country. The census might be divided into two parts. The first, containing the information of general importance to the community, would be compulsory; the second containing the information of more particular importance to the retailer, might be voluntary. In the first category would come the enumeration of types of shops, the number of employees, wages bill, sales volume, the amount of stock held at the date of the census; in the second category, rates of profit and of stock-turn, and costs of distribution, might be dealt with.

The census would provide the economist with statistical data which would enable him to analyse the condition of the trade generally, the volume of trade and the distribution of selling points throughout the country, the division of trade amongst the various categories of distributing agents, departments stores, chain stores, the small family shop, and so on, the varying rates of gross margins and operating expenses amongst the different classes of articles dealt in, and amongst the different types of shops. It would encourage the economist to make further investigations and research into particular problems of retail distribution, instead of leaving him to feel, as he does at present, that he is faced not with virgin soil but with barren ground, from which a multitude of stones must first be removed.

Probably one of the questions most interesting to the general student, and one with which the census could deal, is that of gross profits. In the first place, a distinction must be made between what is commonly assumed to be the retailers gross profit, but which the retailer nowadays, more frequently calls his "markup," and gross margin, which is the true gross profit. A shirt which costs 5/– and is marked up to sell at 7/6 shows a markup of 33⅓ per cent., and the average shopper assumes that that is the retailer's gross profit. But since, over a period, some of these shirts may become soiled or unfashionable or simply be reduced in price because of some

special sale event, not all the shirts will sell for 7/6, and the retailers gross profit, or as we shall now call it, gross margin may actually only be 30 per cent. This difference of $3\frac{1}{3}$ per cent. might very likely decide whether his business for the period had been carried on at a net profit or at a loss. From the point of view of both the retailer and the public it is important that this difference between markup and gross margin should be kept as low as possible. It is no consolation to the customer who has bought at the beginning of the season to know that part of the profit which she has paid out to the retailer has been handed back to her neighbour who has " waited for the Sales."

It should be pointed out that in retail statistics it is usual to express gross margins and costs of distribution, as percentages of the sales for the period under review.

One of the most important factors in determining the profitability of a business is the rate at which the capital is used in the business. Capital in retail businesses consists of fixed assets, such as buildings and fixtures and fittings, and the stocks of merchandise. In the larger retail stores the fixed assets bear a greater proportion to the whole capital involved in the business than is the case with the smaller shop. It is impossible to increase the return from the fixed assets of the business, except by increasing the period in which the establishment is open, and, of course, the present tendency is wholly against increasing hours of work for shop assistants. Nor is it likely that a shift system, by which the building could be utilised for a longer period without increasing their hours of work, would be adopted in this country. Indeed, owing to the shopping habits of the public, the stores are rarely fully occupied even during the present hours of opening. Therefore there remains only the stock, from the careful control of which it is possible, from the point of view of the individual business, to augment the profit-making capacity of the business or, from the broader view of the community, to reduce gross margins. Indeed, not only is it desirable to keep the stock at a minimum as regards the capital involved in the business, but the more frequently the stock is turned over in relation to the sales, the less likely is the stock to include goods which are affected by the seasons or by fashion (the importance of fashion need not be stressed here) and, therefore, the less likely is the markup to be affected by " end of season " reductions. The aim is therefore to obtain the maximum rate at which the stock can be " turned over," bearing in mind always the necessity of holding

adequate stocks for the service of the public, an important qualification.

The rate of stock-turn may be computed :

(*a*) By taking the average of the opening and closing stocks at cost prices, and dividing this average stock *at cost* into the total sales *at selling* for the period.

(*b*) By taking the average of the *weekly* or *monthly* stocks on the cost price basis and dividing this into the total sales for the period which have first been reduced to a cost price basis by deducting the gross margin.

(*c*) By taking the average of the weekly or monthly stocks on a selling price basis and dividing this figure into the total sales. The technical method of estimating the weekly or monthly stocks need not be entered upon here.

The first method of working out the stock-turn gives only a rough indication and actually exaggerates the rate at which the stock has turned, as the stocks at the opening and closing of a season are usually at their lowest point. The third method is actually the most accurate and is the one in use by the larger stores, but the second method also gives a quite reliable indication of the rate at which the stock is moving.

The Incorporated Association of Retail Distributors in their Retail Trade Returns arrive at the rates of stock-turn by dividing the average monthly stocks *at cost* for the period under review into the aggregate sales *at selling* for the same period, the latter total being multiplied by the necessary factor to put it on an annual basis.

It is fairly obvious that the rate of turnover will vary with the type of merchandise under consideration, and it requires no knowledge of retail trade to know that the greengrocer must sell his tomatoes before they become bad, and the sports outfitter his white flannel trousers before September comes, but it is a difficult matter for the expert retailer to know at exactly what rate his various stocks should liquidate themselves. Mr. Neal in his book *Retailing and the Public* states, " the building up of this control (of stock) is, in the first place, empirical." Mr. Marquis in a paper which he read before the Manchester Statistical Society in 1929 said, " I have not been able to discover any figure basis on which it (control of stock) can be done with any degree of accuracy." They both recognise that the control is dependent upon the personal judgment of individuals, and whilst the writer agrees that in the final analysis

control must be dependent upon "the specific and intuitive experience" of the department buyer, the statistical data should be available to act as a guide, and as an indication of what ought to be achieved. "Very little published information is available with regard to rates of turnover in either retail or wholesale trade in Great Britain," and later, "The information is admittedly meagre." (Braithwaite and Dobbs, *Distribution of Consumable Goods*). The Incorporated Association of Retail Distributors has recently made available to its members the rates of stock-turn as applicable to department stores, but amongst retailers generally only very hazy notions exist as to what is a "good" rate of turnover.

In the main, businesses are left to compile their standard rates of stock-turn from their own past experience, and this, of course, is too limited to constitute a really satisfactory guide. It would obviously be no difficult task, given the co-operation of a fairly large number of businesses, to work out a standard performance, a standard rate of stock-turn, for each variety of merchandise and each type of retail establishment, such as the I.A.R.D. has done for department stores.

Amongst the costs of distribution, salaries and wages constitute the largest item and actually account for something like half the total costs. The figures put forward by Mr. Neal as to the position which wage costs occupy in clothing and furnishing stores, probably give a very close indication of the actual position. Taking the total wages roll as 10 per cent. of the total sales, the buying staffs, he suggests, would account for 2 per cent., the selling staff for 5 per cent. and the administrative, counting house, publicity, display and maintenance staffs for 3 per cent. The staff actually engaged in selling thus accounting for only half of the total wages roll.

In a store with which the writer is connected, the wages cost for the buying and selling staffs combined, has been found over a number of years to average 6.7 per cent. and for the administrative and other staffs, 2.9 per cent., showing a very close approximation to the figures put forward by Mr. Neal. Whether the cost of retailing has risen or not, and how far the retailer himself is responsible, are questions which cannot be answered with any degree of accuracy, until some such census as has been suggested earlier has been made, and indeed the longer this census is put off, the more difficult it will become to give an answer.

No doubt wages in retailing have increased since the period before 1914, but few people could be found who would not welcome this,

and who would regard a return to the days of Mr. Kipps as desirable.

The economist is concerned also at the rising number of persons engaged in retail distribution and no completely satisfactory explanation for this has yet been put forward. Certainly so far as the larger department stores are concerned, the character of retailing has changed considerably since 1914, and it might be found that the increase in the numbers employed has taken place not amongst those actually engaged in selling goods, but in the supplying of services, such as hairdressing on the one hand or delivery facilities on the other, the extension of which has been the most striking feature of modern retailing.

Although the retail side of distribution has been emphasised here, enquiry into wholesale distribution and into such services as hotel and catering, garage and hairdressing, would of course come within the scope of the census.

A final reference must be made to the Canadian Bureau of Statistics from whose detailed bulletins on Retail and Merchandising Establishments many valuable lessons as to the scope and method of a census of distribution might be learnt. Although it has been suggested earlier that the census should be undertaken by the Government, the Statistics Section of the Bank of England, which is already performing a very valuable service by its monthly analysis of retail trade and is in contact with the distributive trade, might be found to be the most suited to undertake the task.

It is to be hoped that the conservatism of traders and the niggardliness of the Government will not long delay the holding of a Census of Distribution into an industry, which as Mr. Marquis has pointed out in his foreword to Mr. Neal's book, touches more closely than any other industry the common life of the people; gives direct employment to more people than any other single trade, and is concerned with more than half the national income.

LEONARD COHEN

THE CARRS SILK MILLS, STOCKPORT

In his book, *Samuel Oldknow and the Arkwrights*, the late Professor George Unwin, mentions the Carrs Silk Mills in Stockport as " the second important starting place of the Factory System in Stockport " (p. 25) ; but beyond referring to it a few times (pp. 25, 119) as a Silk mill and (pp. 129—130, 151) when Oldknow was in possession of it as a Cotton factory while he was building his Hillgate factory, he says nothing about this concern. Through the kindness of the executors of the late Mr. John A. Walker of Stockport, I have been allowed to inspect seven deeds dating from 1759 to 1789, which give the story of the vicissitudes of the mills to the period when, or just before, Oldknow began to spin cotton there.

By a deed dated March 24th, 1759, Edmund Watson of Salford, physician, sold a plot of land in the Carrs, Stockport, two and a half acres in extent to Willoughby Ashbrook of Stockport, Cheshire, Silk throwster, John Cooper of Stockport, Silk throwster, John Massey of Stockport, White-limer, and James Shaw of Stockport, Chapman, for a period of 500 years from the above date at a chief rent of £12 to him for his life and £11. 11s. per annum after his death. The deed allows them " to build one or more Silk mills and make any Dam or Dams, Mill Fleam, or Fleams upon the rivulet and Sluices or Channels and for the fixing of any Wheel or Wheels." They are also empowered " to take and use so much marl or clay within the said lands as will be sufficient for the making of so much brick as will be necessary for the erection of such Mills but not elsewhere except to the number of 30,000 which may exceed the number required." Here we get the partnership of two practical silk throwsters and two capitalists, all local men embarking on the great adventure. Their rent is due in two equal portions at the feast of St. Michael the Archangel and the Annunciation of the Blessed Virgin Mary respectively, and if they are twenty days in arrear, E. Watson has the right to distrain for it. The deed also demands the building, within two years, of " one or more Silk Mill or Mills . . . to be of the clear yearly value of £15 at least." There were 124 trees growing on the

land and Watson contracts to remove these. The terms of the agreement between the partners of the enterprise are " that no benefit of partnership shall be taken by any of them ; . . . but that the heirs, etc., of such three of them who shall happen to die in the life time of the longest liver of them shall be entitled to three undivided fourth parts of the said premises, etc."

The preliminary business over, the partners set to work, brick-making, erecting the dam and sluices, the mill and the installation of the waterwheels and machinery and find that their estimates of the cost of the undertaking had been too modest. Accordingly on February 14th, 1760, they borrow £300 from Buckley Bower (a Lawyer of Stockport) and Francis Mason of Stockport, Gentleman, to finish the work and mortgage the land and unfinished buildings to Bower and Mason as security. The mills were erected and business commenced but evidently did not come up to expectation. The original partners were pressed for payment of the £300. They find a purchaser in Robert Ashbrook of Stockport, Silk merchant, who, on February 13th, 1761, had taken over the premises and the debt. Bower and Mason evidently had no great opinion of the " new management " and pressed for their money. Accordingly, R. Ashbrook borrowed £300 from Legh Richmond, Rector of Stockport, who now gets a mortgage on the mills. R. Ashbrook improved and extended the works and added more machinery and secured the front part of the mill by strengthening the damhead. To do this, he had found it necessary to raise more money and got this from Richard Blackburn of London, Silk merchant, who financed Ashbrook to the amount of £1,497 ; but had no security for his loan. Alarmed at this state of affairs, Blackburn on February 11th, 1764, gets a mortgage on the Carrs Mills and pays £300 to Legh Richmond, thus investing £1,797 in the business and becoming a Stockport Silk throwster in 1764, that is, four years before 1768 when Unwin mentions him as entering Stockport silk manufacture. Thomas Tatlock of Stockport, Silk merchant, joins with Blackburn at this time, and Ashbrook was kept on as manager with an agreement that if, within the next twenty years he should pay Blackburn and Tatlock the sum of £449. 5s. and one-fourth part of any further sums spent on improvements of the business, he should have " one full fourth undivided part " of the concern.

Here I should like to draw attention to Thomas Tatlock. In these deeds he is always described as " of Stockport "; but Unwin mentions him (p. 27) as a Silk merchant of Wood Street, London, and a creditor

of Blackburn in 1773. Heginbottom, in his history of Stockport (Vol. 2, p. 320) says that in 1768 there was a silk mill belonging to a Tetlock, in the Market Place. Is this the Tatlock of these deeds ?

The re-constructed firm seem to have been very sanguine about their future prospects, for on August 31st, 1765, they bought from Edmund Watson a piece of land adjoining their original plot and of an area of 572 square yards for a term of 494 years at a chief rent of £2. 0s. 9d. Alas ! misfortune dogged their steps and on June 18th, 1772, they, Blackburn and Tatlock, were owing Percival Barker of Billeter Square, London, the sum of £3,000 " on their partnership account " and they " or one of them . . . the sum of £1,522. 4s. 6d." Therefore the land and buildings are mortgaged to him as security for those sums. Ashbrook did not execute the mortgage. Barker seems to have foreclosed almost immediately, for on July 11th, 1772, Blackburn and Tatlock were declared bankrupts and trustees were appointed for the benefit of the creditors of the said bankrupts. The liquidation of the assets took just over a year and on October 10th, 1773, the trustees sold the land, buildings, mills, and machinery to Antony Bancroft for £1,500.

Bancroft who is described as " of Stockport, merchant," was fortunate, one of the very few who did not burn their fingers in the early days of these Carrs Mills. He erected " a messuage or dwelling house and made several additions and improvements to the said premises " and on August 23rd, 1781, sold the lot to Charles Davies of Stockport, Silk throwster for £2,040.

We now arrive at the last period covered by these deeds and adventurous as their previous existence had been it was quite serene and mild when compared with the financial manœuvres of Davies. It has not been possible from other sources to find anything out about him ; but one deed, as will appear later, shows him possessed of an annuity of £20 and leasehold property from Sir George Warren, Lord of the Manor, and from the Rev. John Watson and the Rev. Charles Prescott, who were Rectors of Stockport. The maps prepared for the sale of the Manor of Stockport in 1850 show a plot in the Park, now occupied as a yard in connection with the Electricity works, but then called Davies' Orchard which may well be part of his land leased from Sir George Warren. It was Davies who began the transformation of the Mills from silk to cotton. His financial transactions can only be described as fearful and wonderful.

Davies, who is usually described as a Silk throwster in the deeds, " erected some considerable additional buildings . . . for the purpose

of manufacturing cotton . . . and intended to carry on the business of carding, slubbing, spinning, and manufacturing cotton." He soon found himself short of money and on February 1st, 1783, he borrowed on mortgage £800 from Joseph Birch of Stockport, Gentleman, and on February 2nd, 1784, another £200 on his bond (of which more later) from Birch. He next found himself on a scale " of greater extent than his then capital in money would admit of and applied to Richard Barlow of Manchester, Cotton merchant," to supply him with Cotton Wool. Barlow agreed to this and gave six months' credit or " at the furthest seven months." Davies was to pay either in cash or in good bills on London at his own option. In about three months in 1784 (see detailed account later) Davies had obtained £1,092. 9s. worth of cotton. This alarmed Barlow who for his own security had on June 19th, 1784, accepted a second mortgage on the mills. He pressed Davies for the money, but could not get it. As a result he insisted on the mills being put up for sale. The advertisement appeared in the *Manchester Mercury* for September 20th, 1785 (see Unwin) but after being " many times advertised and put up to be sold by auction, without effect" although the expense to which Barlow was put was £26, Barlow distrained on Davies' other property but could not even then recover his interest on the debt in full. Davies got out of this impasse by prevailing upon Edmund Kershaw to pay Barlow £1,174. 5s. and take over this second mortgage. This was done on March 22nd, 1786.

What influence Davies brought to bear on Edmund Kershaw of Stockport, Gentleman, to take over this second mortgage, I do not know ; but Kershaw proved a friend in need. Joseph Birch, the holder of the first mortgage now pressed for payment. Davies had managed to pay the interest on this £1,000 up to date, but could not pay the principal. However his friend, Kershaw, came to the rescue and not only paid Birch the £1,000, but also advanced Davies £90 in addition, on the security of the property for this further sum of £1,090. This was on September 14th, 1786.

Now while this was going on, Davies had negotiated a third mortgage on his mills on September 3rd, 1785. He had been buying cotton and borrowing money from Thomas Bateman of Manchester, Cotton merchant, to the tune of £581. 9s. This mortgage deed mentions that there were two previous mortgages of £1,000 and £1,090 with interest. It would appear on the surface that Davies' liabilities on September 14th, 1786, were £1,174. 5s. and £1,090 to Kershaw and £581. 9s. to Bateman.

But other liabilities appear. We have seen that on February 2nd, 1784, Davies borrowed £200 from Birch on his bond; but Giles Walmsley of Stockport, Butcher, had gone surety for Davies and was joined with him in the bond. This is he of whom Samuel Oldknow bought his house in Hillgate (Unwin, p. 42). Not only was he surety for this £200 but also surety for another £100 which Davies had borrowed in July, 1784, from James Worsley of Stockport, Hatter. In addition he had himself lent Davies by 1787, £956. 10s. for which Davies was bound to him in the sum of £1,932. Birch's bond had been cancelled by Kershaw's taking over the mortgage but Walmsley was still liable for £100 on bond and had lent £956. 10s. On October 27th, 1787, Walmsley for the security of these sums takes a mortgage from Davies on the mills, and his leasehold properties and annuity of £20 from William Lee. This is the only deed which mentions these latter assets.

The final act of this drama is shown by a deed of May 5th, 1789. In this deed it states that on the above date Davies was owing Kershaw £2,322. He must therefore have paid his interest and £42. 5s. of the principal; but during this time Davies' debt to Bateman had grown from £581. 9s. to £637. Bateman now forecloses, pays £2,322 to Kershaw and becomes owner of the Carrs Mills. He has other sources of income from the property. On October 1st, 1784, Edward Davenport of Stockport, had bought 871 square yards of the land and was paying a chief rent of £3. 17s. 7d. per annum. On September 13th, 1787, James Bakewell of Stockport, Skinner, had bought 264 square yards at a chief rent of £1. 2s. per annum. On April 24th, 1788, Thomas Hopes[1] of Stockport, Hatter, had leased a building erected by Davies for seven years at £15. 15s. per annum. On July 18th, 1788, William Barlow, of Stockport, Bricklayer, had bought 216 square yards at a rent of 18s. per annum. Thus an income of £21. 12s. 7d. was coming in from these rents. From Unwin we gather that about October, 1789, Oldknow took over the mills while his own factory was being built. How Walmsley went on over his money we do not know; but at any rate he got nothing from the sale to Bateman, his name is not even mentioned: perhaps he recouped himself from the other assets of Davies which he alone managed to include in his mortgage.

BEN HADFIELD

[1] Hopes Carr, off Waterloo Road, Stockport, is named after him.

Statement at end of Mortgage to Richard Barlow, March 22nd, 1786.

Dr. Mr. Charles Davies in his Account with Richard Barlow. *Cr.*

Contra.

1784.		£	s.	d.	1784.		£	s.	d.
June 19	To 5 Bags of Cotton 3 Mol.	26	14	0	Aug. 4	By Cotton returned	5	17	0
26	To 3 Do. 6 Do.	59	0	0					
July 1	To 4 Do. 6 Do.	85	19	0					
10	To 10 Do. 6 Do.	16	19	0					
17	To 4 Do. 6 Do.	90	12	0					
24	To 3 Do. 6 Do.	57	4	0					
Aug. 3	To 7 Do. 6 Do.	82	4	0					
9	To 5 Do. 6 Do.	36	16	0		To 3 Bills No. 9074, 5, and 6 £601 19 0			
14	To 6 Do. 6 Do.	112	5	0					
21	To 1 Do. 6 Do.	30	10	0		To Draft £543 12 0			
24	To 3 Do. 6 Do.	55	6	0		To Cash £2 14 0			
31	To 6 Do. 6 Do.	129	10	0					
Sept. 7	To 6 Do. 6 Do.	119	1	0		£1,148 5 0			
11	To 2 Do. 6 Do.	47	2	0					
18	To 7 Do. 6 Do.	102	14	0					
21	To 3 Do. 6 Do.	46	10	0					
	To interest of £1,092 9s. 0d.	55	16	1		By Balance... ...	1,148	5	1
		£1,154	2	1			£1,154	2	1

RELIGION AND CAPITALISM

It is now more than a generation since Max Weber published his articles on " The Protestant Ethic and the Spirit of Capitalism " in the *Archiv für Sozialwissenschaft und Sozialpolitik*. The importance of his work was at once recognised by historians, economists, and theologians in Germany, though his conclusions were far from meeting with universal approval. Brentano and other scholars launched vigorous attacks against Weber's new " psychological " interpretation of economic history, and echoes of the controversy still reverberate. The literature of the subject has swollen to formidable dimensions, but English writers, with the notable exception of Professor Tawney, have not been prominent in the discussion. There is thus ample room for Dr. H. M. Robertson's " more realistic treatment " of the problem, and his book is well fitted to inaugurate the new series of *Cambridge Studies in Economic History*, issued under the general editorship of Professor J. H. Clapham.[1]

Weber's main object in writing *The Protestant Ethic* was to explain how the modern capitalistic outlook originated, and why it came to dominate the economic life of Western nations. He was careful not to confuse his " spirit of capitalism " with mere acquisitiveness, which has existed in all ages and all countries. " The impulse to acquisition," he wrote, " has in itself nothing to do with capitalism. . . . Capitalism is identical with the pursuit of profit . . . by means of continuous, rational, capitalistic enterprise." In his view, it is only in Western civilisation that there has appeared the " rational capitalistic organisation of (formally) free labour." He distinguished further between " speculative pariah-capitalism " (of the type popularly associated with Jewish financiers) and the " rational organisation of capital and labour " upon which modern industrialism largely rests. His attention was deliberately concentrated on this latter type of capitalism ; he made no attempt to explain the psychological basis of speculative capitalism, nor had he

[1] *Aspects of the Rise of Economic Individualism : a Criticism of Max Weber and his School.* By H. M. Robertson. (Cambridge University Press. 1933. pp. xvi + 223. 10s. 6d.)

any intention of maintaining that "Capitalism as an economic system is a creation of the Reformation." He was very anxious that his conclusions should be regarded as valid only within narrow limits, and emphasised the definitely provisional character of his work; but both his disciples and his opponents have found it difficult, in the heat of controversy, to keep their arguments within the limits which Weber imposed upon himself.

Weber discerned the spiritual origins of his "bourgeois capitalism" in the Puritan movement, and especially in the Puritan conception of the Calling, which in its mature forms developed a spirit of worldly asceticism of an industrially productive character, in sharp contrast with the relatively sterile character of medieval monastic asceticism. He adduced an imposing body of evidence to show that Calvinism, and other forms of non-Lutheran Protestantism, inculcated the ceaseless acquisition of money, not for the purposes of luxurious living, but as an exercise in ascetic discipline and a proof of salvation. The whole-hearted pursuit of wealth became a religious duty; business habits which had been barely tolerated in earlier generations were now considered to be morally virtuous as well as economically expedient. The combination of acquisitiveness and asceticism naturally resulted in the indefinite accumulation of capital, and so laid not only the spiritual but also the material foundations of modern industrialism. As Puritanism degenerated in spirit, and as capitalism seated itself more firmly in the saddle, the religious sanction for the acquisitive process became unnecessary and faded away: though ascetic principles which derived their original justification from Calvinist doctrines of the Calling may still exercise an irrational influence over the conduct of modern millionaires, who continue to accumulate money (which they have no desire to spend) simply because their business activity has become an end in itself.

Weber found that his theory enabled him to give a plausible explanation of many otherwise perplexing features of modern economic organisation. In particular, it seemed to account for the curious fact that, in countries of mixed religion, "business leaders and owners of capital, as well as the higher grades of skilled labour . . . are overwhelmingly Protestant." This generalisation, he pointed out, remained true whether the Protestants were in a majority or a minority; it was therefore not to be explained as the result of institutional adaptation in favour of the dominant religion. The contrast was even stronger between Protestant and Catholic

countries; it was in the Protestant countries of northern Europe that modern capitalism had first come to maturity, and contemporary observers of the development had noticed that "there is a kind of natural inaptness in the Popish religion to business, whereas, on the contrary, among the Reformed, the greater their zeal, the greater their inclination to trade and industry, as holding idleness unlawful."

To Dr. Robertson (and to many other students of the question) Weber's methods and conclusions seem fundamentally wrong-headed. Not content with emphasising the incompleteness, one-sidedness, and ambiguity of Weber's work, Dr. Robertson denies that religious doctrines (whether Protestant or Catholic) exercised any decisive influence upon the outlook or conduct of the early capitalists. He points out that capitalistic organisation was well-established in some branches of European industry long before the Protestant Reformation; thus, even on Weber's narrow definition of capitalism, Calvinist doctrine cannot have been the origin of the capitalist spirit. Moreover, Dr. Robertson challenges Weber's right to make a rigid distinction between speculative capitalism and "bourgeois" capitalism, since rational speculation is a necessary part of the modern capitalist system, while many of the great industrial capitalists of modern times have been eminent also in commerce and finance.

In his more direct attack upon Weber's central thesis Dr. Robertson shows that Puritanism spoke with an ambiguous voice about usury, the pursuit of worldly gain, and other necessary features of a capitalist society. On this point he implies that Weber selected from the general body of puritan doctrine the passages which favoured the capitalist spirit, and ignored the more numerous passages in the contrary sense; similarly he selected from Catholic writings those passages most antagonistic to "big business," and failed to notice that many Catholic theologians (especially among the Jesuits) recognised the necessity for accommodating their teaching to the new forms of economic enterprise. Reversing Weber's principle of selection, Dr. Robertson almost reaches the paradoxical conclusion that Catholicism favoured the growth of a spirit of capitalism, while Puritanism hindered the process. Without pressing this point to its logical limit, he is impelled to believe that neither Puritanism nor Catholicism was a dominant factor in moulding capitalist mentality; on the contrary, the spirit of capitalism gradually permeated both Protestant and Catholic

doctrine, as it had already permeated the business conduct of both Protestant and Catholic men of affairs.

In general, Dr. Robertson reverts to the older, pre-Weberite point of view that " the spirit of capitalism has arisen rather from the material conditions of civilisation than from some religious impulse. . . The spirit of capitalism is not the creator but the creation of the class of business men." According to his interpretation, " the great influence which moulded the history of capitalistic endeavour was the escape from medievalism " ; Protestantism, if indeed it exerted any considerable influence over the transition in economic thought, was important merely as a negative force causing religious schism, which weakened ecclesiastical control over business morality and thus set free the capitalist spirit from traditional trammels. This release of enterprise came at a time when the scope of commerce (and consequently of industry) was being immensely widened by the opening up of new sea routes to America and the Far East. For this new orientation of business activity the northern countries on the Atlantic sea-board were more favourably placed than the Mediterranean countries which had been commercially and industrially pre-eminent in earlier centuries. The northern economically progressive countries became Protestant, while the southern economically conservative countries remained Catholic ; but there was no necessary connection between the religious and the economic alignment, except that the progressive countries (and the progressive men within each country) would quite naturally be the first to break through the bonds of medieval traditionalism, in religious as well as in economic affairs. A further consequence of the great geographical discoveries was a stupendous influx of the precious metals from America, which caused a serious rise in European price levels and upset all customary economic relationships. " Society was forced into the adoption of a more individualistic attitude by the mere rise in prices " ; and thus the Western nations (Protestant and Catholic alike) were drawn into that whirlpool of economic individualism which (says Dr. Robertson) " is the basis of all that is best in capitalism."

Many of the points which Dr. Robertson scores against Weber are by no means novel. Nevertheless, Professor Clapham is justified in claiming that " Dr. Robertson's book contains the first thorough historical discussion, in English, . . . of a dogma much debated, though sometimes uncritically received by economic historians during the last twenty-five years." On the other hand, it must be

admitted that Dr. Robertson's work, good as it is, would have been even better if it had been less polemical in tone, more balanced in judgment, more willing to believe that Weber's limitation of scope was not a mere dodge to suit the exigencies of argument. Nobody should mistake *The Protestant Ethic* for a complete work—Weber's warnings against such an error are too numerous and too explicit. Nobody saw the one-sidedness of his analysis more clearly than Weber himself; on that note he ends his book. "It is, of course, not my aim to substitute for a one-sided materialistic an equally one-sided spiritualistic causal interpretation of culture and of history. Each is equally possible," he concludes, "but each, if it does not serve as the preparation but as the conclusion of an investigation, accomplishes equally little in the interest of historical truth."

ARTHUR REDFORD

A VIEW OF DEPRESSION

" In the short run . . . ideas are unimportant and ineffective, but in the long run they can rule the world. . . . It may be that the forces . . . released by the ideas of forty years ago, have become so powerful . . . that it is now too late to arrest them. But until the case which experience and more recent developments of knowledge have shown can be made against them, has been argued with as much patience and disinterested intelligence as went to the establishment of their ascendancy, we are not justified in concluding that reason and persuasion have reached the limits of their effectiveness. At all events it is worth trying " (p. 200).

One must believe, therefore, that this is an essay[1] in persuasion directed against ideas and prejudices that Professor Robbins believes to be erroneous and more than dangerous. Few people, even though they cling to their errors and remain shackled by their prejudices, will remain unimpressed by the necessity shown by the author for clear thinking and right action at this period of world instability. The light-hearted planners, those whom Professor Robbins would not object to describing as light-headed inflationists, together with nationalists and the isolationists of monetary theory must pay attention to the results here said to have emerged from the disastrous interferences of the recent past. " We fail to realise the connection of things if we attribute the civil disorder and the nationalistic chaos of continental Europe entirely to the malevolence of violent men or the lack of foresight of the makers of treaties. . . . The unfortunate men who were shot down in the streets of Vienna the other day were the victims, not only of anti-democratic politics, they were the victims also of an economic policy which had eaten up the capital of industry, and by producing desperate impoverishment had provoked a violent reaction " (p. 198). And again, " It is quite probable, if there is no immediate outbreak of war on a large scale, that the next few months may see a substantial revival of business. . . . It may be that the next two or three years (or even longer) may be years of comparative tranquility. But it is impossible

[1] *The Great Depression*, by Lionel Robbins (Macmillan. 1934. 8s. 6d.).

to feel any confidence in a continuance of stability" (p. 195). "The tendencies making for instability . . . have not been weakened during the depression . . . they have been strengthened. It is true that there are some signs of recognition of the mistakes which have been made in the sphere of monetary policy. But as yet there seems little will to repair them, still less to face the wider economic consequences which such repair would involve. For the rest, so far from there being any recognition of the instability and confusion which has been caused by the policy of interventionism, the majority of the leaders of public opinion seem to have drawn from the events of the last few years the conclusion that more intervention is necessary" (p. 197).

No apology is needed for so extensive a quotation. No better form of words can be found to indicate the necessity for reason and for persuasion towards reason. No better form of words can defend an appeal to the public, or the publicist; unfortunately, no better form can accuse and condemn him. Ideas, says Professor Robbins, are in the saddle, and have led us into the chaos, the madness and the atrocities of the last few years. He would substitute another set of ideas to jockey us into a better place. In the face of our bitter experiences, those who would lead public opinion have an unenviable responsibility for the correctness and the wisdom of their views.

It is a weakness of the idea with which this book was written that reason and unambiguity must be combined. It is not sufficient to present an argument of probabilities and possibilities, to point out the possible dangers and possible merits of this course and assess the defects and advantages of another. Forcefulness and clarity are needed, perhaps at the expense of caution. Professor Robbins presents his case against the expert advice of the past—and its interpretations—with a clearness of outline that must bring a blush to those who in the past have toyed with heresy—and probably they are many. Yet, at times, one is conscious of the defects as well as the merits of this course.

No one who is conscious of the erroneous beliefs and pathetic hopes now so widely prevalent will willingly try to blunt the edge of Professor Robbins' sword. How can we disapprove of an assault upon the new economic policy of scarcity and upon the muddle-headed interventionism (an ugly word coined for an ugly deed) that passes for "planning"? Knowing the dangers of inflation, can we divorce ourselves from criticism of those who pass this dangerous weapon with their approval to an untutored public? Having seen a

world deprived of the gold standard, must we not regret a world of monetary chaos and see with dismay attempts to deprive it of what is left of true reason? No one can doubt that this is a salutary book, and a telling blow against the cure-all medicines of the economic world. Having said all this, one can nevertheless find considerable scope for disagreement.

It is difficult indeed not to conclude that the author's interpretation of monetary policy is too simple to fit all the facts. Whether this simplicity is a stick cunningly cut to chastise an insular and gullible British public (which is always over-ready to blame the foreigner), or whether it has been fashioned solely from conviction is not a matter of much importance. If it is a misleading simplicity, it may in the future lead to consequences similar to those already experienced.

Professor Robbins is intent upon refuting the argument that gold-maldistribution consequent upon the actions of the U.S. and France was responsible, or largely responsible, for depression. He says, p. 23, " It is clear that the authorities of the Federal Reserve Bank and the Bank of France did nothing (after 1929) to prevent their increased reserves becoming effective. It is not really sensible, therefore, to attribute what happened after 1929 to their policy. . . ."[1] The maldistribution argument, accordingly, centres upon what happened, and upon the non-observance of the gold-standard rules prior to 1929. The relevant gold standard rule is that gold movement should bring about " no net expansion or contraction of the money supplies in the world as a whole,"—a rule, so expressed, in which it is difficult to feel much confidence. As a conclusion, America is not responsible for any maldistribution in that the increased gold reserves of the Federal Reserve system were used as a basis for increased reserve earning assets, and consequently as a potential basis for an increase in total deposits. In a broadly similar way the Bank of France is absolved from " blame," for the reason that notes were issued on the basis of the gold inflow. While, finally, any existent maldistribution is asserted to be a consequence of our unwillingness and, perhaps, inability to deflate and, hence, of our non-observance of the rule of the international standard that demands deflation when gold is lost. Our own economic incapacity thrust gold upon the French and American monetary systems,

[1]Some will think that this is dependent upon conclusions derived from studying in detail the theory and the arts of central banking : the author does not discuss the powers of central banks.

which, so far from sterilising it, used it as a basis for the greatest inflationary movement in history.

Even if we are unwilling to attribute blame to the monetary policies of an unfortunate situation, and even if we do not ascribe depression solely to such policies, these points can be made to suggest that Professor Robbins' conclusion is founded upon argument and upon material too slight for the strictures he implies.

1. Apparently, Professor Robbins begins his examination of Federal Reserve policy at the year 1926. Prior to 1926, policy had been characterised by restraint. Earning assets had taken a downward course. Gold reserves between 1923 and 1925 were tending downwards, but the total gold used for monetary purposes more than compensated the decline, as gold or its equivalent was introduced into circulation. Certainly during this period, gold was not having its inflationary effects—from one point of view quite properly as the gold standard had not become once more a true international standard. Nevertheless the tendency was deflationary.[1]

2. The expansionist movement in the years 1926 and 1927 made orthodox use of the incoming gold, but this does not decide the question of maldistribution.

(*a*) Before 1926 the gold reserve was excessive in relation to legal requirements, *i.e.*, it could have supported a greater credit structure. The improved trade of 1926 to 1928 freed gold and, by enlarging the supply of eligible paper for the backing of the note issue, should have made possible an expansion which before 1926 might not have been deemed desirable. The banking system was in a stronger position to export gold during the expansion than before.

(*b*) The expansion of credit up to the middle of 1928 appears less impressive as an inflationary movement when one takes account of the increase in wealth, wages, and the earnings of capital. It is necessary to take into account the monetary requirements of the new factors brought into the productive process. To some extent the increase in the volume of money was not doing its work of inflating ; but was being used for increased balances, increased speculation, and a larger volume of transactions. This is by no means to deny an inflation in 1928. But it causes one to be cautious of accepting the most obvious implications of the evidence of increasing and more active deposits. Figures giving the transaction (or Fisherine) velocity of circulation demand most cautious interpretation.

[1]For an interesting and exhaustive survey of U.S. monetary policy, see Harris, *Twenty Years of Federal Reserve Policy*.

(*c*) The coincidence between the loss of gold and the inflationary movement of 1928 was in part accidental. In part it was the result of French developments[1] ; a repatriation of (unused) gold that the War had driven from Europe. Domestic considerations apart—and they must be kept apart if we are talking of the logic of an international standard—there is no reason why this loss should have caused a reversal of policy. That a maldistribution tended to be corrected was not solely a consequence of American action.[2] It did not cause and should not have caused deflation because its receipt had not brought a permanent rise in prices. But this development together with the exigencies of the domestic economy brought an attempt to reverse the policy.

(*d*) It may be argued that the inflationary impetus following American lending would never have been possible had American prices been pushed upwards earlier and more gradually. The loss of gold that consequently followed was brought about at a time when the stage was well set for a world inflation.[3]

(*e*) Despite inflation, the demands of France and large capital exports, the monetary stock of gold in 1929 remained almost unaltered. The maldistribution up to 1926 (abetted by a usual desire for business needs to be served) culminated in an effort to part with gold—an effort that troubled the reason of those concerned with the domestic situation ; it resulted in a burst of activity too violent to be controlled, a speculative fever that brought a world tendency towards inflation (when a domestic tendency was needed), and finally left the maldistribution substantially unchanged.

3. The attraction of balances and gold to the U.S. in the last stages of boom, however inevitable it may have been, has no justification in the Ricardian theory which is the basis of Professor Robbins' case. It tended to maldistribution because it cannot be said to have resulted from fundamental (but only transient) disequilibria between local price levels, while it was ineffective in that it did not tend to remedy what disharmony existed.

Professor Robbins admits that the French aspect of the question is less clear. What does seem clear is that the rise in French prices preceded rather than followed gold imports, and that, therefore, the

[1] See below.

[2] It can be argued that loss of gold to France corrected one maldistribution by helping to create another.

[3] American policy was vacillating ; and it is, in part, possible to attribute to this fact the unfortunate march of events after 1928.

movement of gold to France was deflationary in its net effects. Over-valuation of gold has no place in the orthodox use of an international standard. When one considers the proportion of the world's gold needed by the French monetary system, the legal limitations upon the control of the Bank of France, the method by which gold was sucked into France—a movement itself the reversal of an inflationary tendency, one must place upon the peculiar conditions of the French monetary re-adjustment of the post-stabilisation period, a certain responsibility both for the boom and the depression. Whether or not one wants to call this maldistribution or attach blame, the inference appears undeniable.[1]

Our own position was certainly unenviable. That during the gold losses of the pre-depression period we did not indulge in a fresh (or re-doubled) attempt to deflate, can be explained without throwing much light upon the question of maldistribution. In 1927 and 1928 our price level was falling, and Bank Rate stood at the high figure of 4½ per cent. During those years we were doing what could be done to prevent maldistribution. Gold costs were tending to fall with money wages ; unemployment was maintained at a high level and the cost of borrowing remained exorbitant and unprecedented for a country so situated. A further impulse to deflation could have had no appreciable effects upon our cost structure during the relevant period, and would have had little effect upon mobile balances that were obeying a more powerful magnet than central bank discount rates. Deflation in this country could only have brought deflation to those countries in which inflation was merely a mirrored movement, and made even more unstable and more enlarged our holdings of international balances. We could have made depression even more certain but could we have curbed the boom? Outside the main current of events we were powerless to do other than attract balances from countries where the tide of inflation was running least strongly, and where money was least profitable. Professor Robbins attaches great world importance to our disequilibrium ; it must certainly have damped down world prosperity, but our own losses of gold were too trifling to be important. Our attraction of gold, due to attempts to increase our efforts to deflate, must inevitably have brought further aggravation of the discrepancies of the local situations.[2]

[1] For an instructive account of French monetary policy at this period, see Hawtrey, *The Art of Central Banking*.

[2] Anything short of a really militant bank rate appears powerless to attract funds from a centre where boom conditions prevail.

One finds it difficult to believe in the logic of a gold standard during such unsettled conditions. If the gold standard is to work satisfactorily, rising prices must be possible without devastating boom, and falling prices without devastating depression. The movements of the post-war years were too great to expect any other than these unhappy results. It is no support of the gold standard to say it is not very clever to question its upholders in the past. The postulates of Bagehot may not be the postulates now applicable. Even in as frictionless an economy as one dare imagine, deflation cannot successfully follow the movements of the large balances common to the world of pre-depression ; nor can inflationary adjustments be made temperately in a few years to the gold movements of a decade and more. Whatever the merits of the gold standard (and it must not be forgotten that during depression competitive deflation is a form of economic armament as inimical to welfare as some more widely advertised), whatever its logic and its past contributions to welfare, some of its virtue had already left it in the pre-depression period. To ascribe that to mismanagement is useless. There existed disharmony between the instrument at our disposal and the task to be performed.

There is no need to press the arguments any further. One has no wish to take the view extreme from that of Professor Robbins. Things having turned out as they have, one must deeply regret any additions we may have made to the burdens of the world, even if one refuses to take the responsibility for them in a measure that Professor Robbins would not deem more than generous.

One further point ; Professor Robbins makes use of capital theory after the Austrian School to explain the cause of boom and the requirements of depression. He places more stress on alterations in interest rates, and less stress on induced dislocation of prices (in altering the structure of industry) than one likes to admit without more complete discussion. This relative emphasis leads to some difficult conclusions.

He says (p. 32) " The new money (lent by the banks) will flow to those parts of the economic system most affected by the rate of interest. There will be an increased demand for . . . capital goods " (not a relative decrease in demand for consumers goods). Again (p. 69) " depression is essentially a depression in the constructional and raw material producing industries . . . demand at the consumers end has become relatively high," (not the demand for capital is relatively low). Professor Robbins' views on the requirements of the

present are illustrated by the following passages. "There has probably been sufficient liquidation and cost reduction to restore the prospect of profit if . . . . " (p. 183). And (p. 73) "Similarly in dealing (in the past) with the wider dislocations of commodity prices and production no attempt was made to bring about *artificially* easy conditions. The results of this were simple . . . the firms whose positions were *fundamentally* unsound realised that the game was up and went into liquidation.[1] After a short period of distress the stage was once more set for business recovery."

Who can doubt that depression results in a composite and not in a simple disorganisation? The abnormal building of capital during boom is given the semblance of rationality because of the abnormal cheapness (at the time) of co-operant factors due to the lag between wholesale prices, and wage rates and rents. Capital is wasted or rendered unprofitable because once created the abnormal cheapness disappears, for real wages once more rise. Depression swings the price of co-operant factors to an abnormal dearness resulting in unemployment, as wages and fixed charges fall less than wholesale prices. Depression, therefore, throws out of profitable production the mistakes of boom together with enterprises normally profitable, and accentuates depression in those industries most affected by business unprofitability. In boom, one may say that demand for capital is relatively great or for consumers' goods relatively small. In depression, that for consumers' goods is relatively great, and for capital goods small. Scientifically it matters little which way one puts it; but politically it does matter. Politically, to explain depression in terms of a high demand for consumers' goods is to imply a discipline of cost reduction that runs the risk of being as futile as it is aggravating of distress. One would not subscribe to a policy of raising wages in depression any more than one would support a policy of subsidising them in boom; neither would tend to restore equilibrium, if for different reasons. Wage reductions during depression are at best only a means to induce better means. To see in them the appropriate means is to use a theory of capital to illuminate a situation to which it has only partial, if important, relevance. A true "trade cycle" theory, if not wholly a monetary one, must observe monetary as well as structural disequilibria. Persuasion of this kind will hardly be conducive to European tranquility.

[1]Our italics.

This theoretical structure supports practical inferences diametrically opposed to experience. Liquidation is not simple. Depression attempts to liquidate indiscriminately. Capital consumption is not only an experience of inflation but also of depression. In Lancashire we are still endeavouring to liquidate the mistakes of 1920 and even earlier booms. If we prefer "the lingering disease" it is not because "we eschew the sharp purge" but because we know how difficult it is to salvage what should be salvaged, and how easy to jettison the whole. It is useless to compare interference with the logical individualism; our criterion must be the system as we know it.

The principles at stake in this book are not only important to our future happiness, they are themselves problems of inherent intellectual difficulty. That to-day there is such divergence of views among economists who are both disinterested and acute is indication if not proof of many different interpretations of the economic present. One cannot doubt that even if they all contain an element of truth, that element is likely to lose its virtue unless seen against its appropriate background. Thus, there can be no question of the great value of this work as a critique of the theories of yesterday (and of to-day). If Professor Robbins persuades his readers to distrust panaceas and catchwords, dictators and bureaucrats, governmental regulation of the details of economic organisation and all the paraphernalia of the new economics, as there seems a reasonable chance of doing, he will not worry unduly if (perhaps patriotically) one seeks outside this country the origins of depression or suspects the gold standard of an inability to maintain its pre-war reputation.

JACK STAFFORD

REVIEWS

The Art of Central Banking. By R. G. HAWTREY. (Longmans, Green. Pp. 464. 18s.)

ONE is glad that Mr. Hawtrey has gathered together these valuable essays and addresses into a permanent and convenient collection, grouped around a new and long dissertation on " The Art of Central Banking." Bearing in mind the nature of this work, and despite Mr. Hawtrey's well known powers of lucid exposition, one cannot help but feel surprised at the thread of continuity running through the essays. First, one is introduced to some realistic aspects of this depression in a description and criticism of recent French monetary policy, and in a commentary upon fluctuations in Wall Street. With this realistic knowledge at the reader's disposal, Mr. Hawtrey turns to discuss the necessities for banking policy. To serve as an instrument of monetary analysis, Mr. Hawtrey uses the concepts of income and outlay to arrive at his central problem—the position, influence, and appropriate policy of central banks. The last is well discussed in Chapter V. on " Money and Index Numbers." The remainder of the volume deals with Mr. Keynes' treatment of similar problems and reproduces Mr. Hawtrey's evidence before the Macmillan Committee.

It is perhaps in Chapter V. that Mr. Hawtrey comes to his most interesting conclusions. He rejects the goal of wholesale price stabilisation in favour of a stabilisation of efficiency earnings. He sees two general influences upon the price level of goods and final services ; that of alterations in real costs, and of alterations in consumers' income that is unaccompanied by alterations in resources employed. The former should retain their influence on the price level ; the latter should be banished. The price index to be stabilised is so obtained—a wholesale price list corrected for alterations in real cost : wholesale prices because of their sensitivity, and because ultimately world stabilisation is the end. In this way, Mr. Hawtrey anticipates an end for monetary policy that is gaining adherents. For among economists the idea is gaining ground that it is consumers' income that should be stabilised, provided adjustments are made

for social growth. It is at this point that Mr. Hawtrey appears to part company with others whose views are substantially similar to his own. Mr. Hawtrey is prepared to allow an expansion in income with an increase in social resources, whether labour, "land" or capital. There appears a disposition among others to neglect accretions of capital when obtained with a stationary population, and to assume natural resources constant. Logically, there seems much support for the view here expressed. It is desirable that this point should be further discussed, because the practical importance of capital growth relative to population is likely to increase.

J.S.

Economic Essays in Honour of Gustav Cassel. (Allen and Unwin. Pp. 720. 30s.)

THE imposing list of contributors to this volume is a worthy reflection of the esteem in which Professor Cassel is held, not only in his own country but by economists the world over. Like the work of the master, the subjects treated in this book are only limited in their nature by their connection with the economic aspect of action, ranging as they do from an essay by Professor Gregory on "Economic Theory and Human Liberty" to "A Note on Price Theory with Special Reference to Interdependence and Time," contributed by Professor Ohlin. One observes that this indeed is a wide range, asking some versatility of the reader. Despite the catholicity of the joint authors, this is decidedly a book for economists. Not because the work is remote from the world, for it was written at a time which precluded this possibility, but because of the general necessity for discipline. But this is just as it should be in a work honouring Cassel. This is no bedside book for the economist, unless he is uncommonly wide-awake, for a number of the included essays are difficult (not to say controversial) contributions to difficult subjects. They are not rendered more easy of comprehension by their compression into that very difficult medium, the short essay.

Perhaps in the majority of these contributions, this fault—or rather, this inherent difficulty—prevents full value being obtained from the careful and thoughtful work that has gone to the production of this volume. The reader will find much that is new—this, I think must be true of almost any reader; he will find much with which he agrees, a great deal that demands and merits further discussion, and much that will meet with his disapproval. As such, no review

can do justice to the contributors ; one can but pay respect to the work and its occasion.

Professor Angell's " Monetary Control and General Business Stabilisation " provides an illustration of the difficulty mentioned. No one interested in monetary theory and convinced of the importance of banking practice could read this article and be convinced on all the points raised. Disagreement and doubt are not disentangled by the author's exposition, which is summary to the point of ambiguity, if not of incomprehensibility. One cannot think that novel ideas, or novel treatments, are so done justice.

Notwithstanding this disadvantage—which can hardly be overcome without sacrificing some of the value and dignity of this book—it must be said that there is a host of good and stimulating things awaiting the reader—a sufficiency that will keep him intellectually active for years to come.

J.S.

Economic and Social Investigations in Manchester, 1833—1933. *A Centenary History of the Manchester Statistical Society*. By T. S. Ashton. With an introduction by the Earl of Crawford and Balcarres. (London ; P. S. King and Son. Pp. xii + 179. 5s.)

When, in 1844, Frederick Engels drew up his indictment of capitalism, he argued through many pages that the English middle class, and " especially the manufacturing class, which is enriched directly by means of the poverty of the workers," persisted in ignoring that poverty. It would not, he said, admit distress ; it was utterly ignorant of everything which concerned the workers ; it refused to realise that it lived on a soil that was honeycombed, and whose collapse " is as certain as a mathematical or mechanical demonstration." How serious the overstatement was, the reader of Mr. Ashton's book can judge. For, among the very class that Engels, then a newcomer to Manchester, was denouncing, was an influential group whose interest in social facts was hardly less than his own, and whose investigations and example helped not a little in those movements for social amelioration that averted the " collapse " of the economic order that seemed to him so imminent and so inevitable.

The first five chapters of Mr. Ashton's book are an extremely valuable contribution to the social history of the 'thirties and

'forties. This is the traditional dark age of Manchester, and although Mr. Ashton is too discriminating to attempt to make it appear as a new age of enlightenment, it is something to find that those who walked in it were far from being unconscious of its horrors. " The Manchester Statistical Society," said its first annual report, " owes its origin to a strong desire felt by its projectors to assist in promoting the progress of social improvement in the manufacturing population by which they are surrounded." No one can read Mr. Ashton's account of the social surveys undertaken in the 'thirties without being impressed at the high degree of disinterestedness the Society displayed. The cloven hoof, of course, peeped through occasionally. On factory legislation and the virtues of the factory system the Society was obstinate, but on general conditions of poverty, and on education the society was far ahead of what Engels called " bourgeois " opinion, and was not afraid of the facts, although it was clearly afraid of the state of things that those facts revealed.

There is a delightful passage in Engels (which has its parallel in a more famous passage of " Coningsby ") on how the visitor to Manchester would be handed over to one or two of the Liberal manufacturers. " The manufacturer understands you, knows what he has to do. He accompanies you to his factory in the country ; Mr. Greg to Quarrybank in Cheshire, Mr. Ashworth to Turton near Bolton, Mr. Ashton to Hyde." The manufacturer would exhibit, his mills, his cottages, his school, and his operatives, and his " easy patriarchal relation " towards them. But " if you should wish to be accompanied through the working people's quarters of Manchester, . . . you may wait long before these rich bourgeoisie will help you. These gentlemen do not know in what condition their employees are nor what they want, and they dare not know things which would make them uneasy or even oblige them to act in opposition to their own interests." Alas, for Engels' accuracy. His Liberal manufacturer would probably have been only too anxious to present the inquiring visitor with the pamphlets of the Manchester Statistical Society on these very points, including several that had anticipated Engels' own title, " The condition of the working classes." For to the Statistical Society of the 'thirties the cotton trade contributed the Gregs of Styal, James Kennedy of Manchester, Henry and Edmund Ashworth of Bolton, Samuel Robinson of Dukinfield, and Thomas Ashton of Hyde. And its founders included James Phillips Kay whose writings on sanitary conditions gave Engels some of his most juicy quotations.

Mr. Ashton with an art that conceals a great deal of research and what must often have been an irritating fragmentariness of material, sets the Manchester Statistical Society in its place as an influential agency for reform, and as an inspirer of similar movements for social study in other parts of the country.

In its last seventy years the Society's activities have been more diffused, but, as Mr. Ashton describes in a skilful chapter, " in the sphere of banking and currency theory, in particular, constructive work of a high order was presented in the Society's rooms during the 'fifties, 'sixties, and early 'seventies of last century." The principal names are those of William Langton, John Mills, and William Stanley Jevons. Mr. Ashton here establishes what it is fair to call a new Manchester school of economists.

One hopes the Statistical Society of 1934 is grateful for the notable book Mr. Ashton has made out of its history (one thinks with a shudder of what it might have been in less able hands) and that it observes the warning with which he closes : " The besetting danger of such associations as ours is that they should become debating societies, or mere amplifiers for the commonplaces of public men." Lancashire, as he says, needs a statistical society to-day, as she needed one a hundred years ago.

A.P.W.

The Social Survey of Merseyside. Edited by D. Caradog Jones, assisted by J. E. McCrindell, H. J. H. Parker, C. T. Saunders ; *Secretary :* N. L. Hume. (University Press of Liverpool and Hodder & Stoughton Ltd. Vol. I., 15s. ; Vol. II., 21s. ; Vol. III., 25s. Set of 3 Vols., 45s.)

The issue of these three volumes represents the final stage in a magnificent piece of co-operative social research of which its authors, and particularly its Editor, may well be proud. Some of the results of the Merseyside Survey have already been published in pamphlet form, but now that the work can be seen as a whole in its tremendous scope, its scientific accuracy and caution, and withal, its essential unity it is quite clear that it will stand as a model for future investigations in the field of social habits and conditions.

The Survey, the first with any pretensions to comprehensiveness to be made outside London, covers an urban area which, though divided into four county boroughs and several urban districts, is to all intents and purposes a single social and economic unit. The greater part of the data used in the Survey is original, much of it

relating to topics never before investigated on a large-scale statistical basis. The first volume analyses the population, housing conditions, incomes and poverty and the distribution of working-class expenditure. The second goes back to the economic factors involved ; the industrial position of Merseyside is examined and special studies are made of economic conditions in the principal occupations. The third volume deals with the political administration and public services, with the use of leisure, with those groups, such as schoolchildren, adolescents, those dependent on the social services, and " sub-normal types " for whose protection society has a special responsibility. The various parts are well knit together so that the causes underlying apparently disconnected phenomena are impressed on the reader's mind.

The economic position and prospects of the area make a grim picture. Out of an insured population of 400,000 people there is estimated to be a " labour-surplus " (after allowing for a " normal " unemployment rate) of some 74,000. (Nearly two-thirds of this surplus is accounted for by the slump, but few would assert with any confidence that international trade—the loss of which is far and away the chief cause of Merseyside's misfortunes—will return to the pre-1930 level within the near future. The prospect of new industries redressing the balance is poor. Only three expanding industries employed more than 20,000 persons, namely, Distribution; Hotel, Boarding house, etc., service ; and Building. Of these, the last two are increasing on Merseyside at a slower rate than is the country as a whole. Moreover, there is a tendency for what is left of the declining staple industries—Shipping and the ancillary services—to move away from Merseyside ; there has been a serious decline in the proportion of Britain's overseas trade, goods and passenger, carried through this port.)

Many of the social problems so prominent in the survey, overcrowding, poverty, disease, can be traced directly to the economic decline of the post-war period. Others have their roots deeper in the past, in the racial composition of the population, in the pernicious (and as the Survey points out quite remediable) system of casual employment on the water front, and in the vile slums built a century ago. The Survey tries to disentangle these economic and non-economic factors in studies of the relations between poverty and overcrowding, between poverty and unemployment, and in an analysis of the social conditions among the different immigrant populations.

One of the most valuable and original sections of the Survey is the detailed study of "subnormal types," the blind, deaf, mentally deficient, physically defective, criminal and chronically destitute. This analysis proves beyond all question the very close association between these various afflictions. The people affected are found in "pockets," in the same streets, in the same families. Moreover, the characteristic common to all these classes is an abnormally high birth rate.

Among other features of the Survey we may note the analysis of family budgets, which shows clearly the necessity for a revision of the Cost of Living Index; the investigation into the question of how far the families living in overcrowded or slum conditions can afford to pay for more accommodation; the analysis of tenants in Corporation houses; the study of the educational system, which shows how extremely restricted are the opportunities for secondary schooling; and the application of statistical method in the unfamiliar fields of church attendance and the use of leisure. Throughout, the methods and standards of measurement have been chosen so as to render comparison possible with other Surveys, notably with the New London Survey, and there is an interesting comparison of some of the chief results of the two enquiries. The statistical tables throughout are of a high standard. It is a pity, though, that more information is not given on the dispersion of wages. There is a tendency to rely on an average when complete distribution would give useful information.

The chief value of a Survey of this kind is to supply the facts on which a rational programme of action can be based. Indeed the solution of a problem is often implicit in the statement of facts itself. The authors rarely suggest remedies for the social ills revealed; perhaps, indeed, they are overcautious. The scientific outlook in social affairs is not so widespread that everyone will draw the correct conclusion from a mere statement of facts.

A reading of the Merseyside Survey suggests some conclusions about social surveys in general. It is clear that these surveys should, in the first place, be closely associated with the local authorities. Not only is the co-operation of the latter in supplying information essential to the Survey's success, but also the Survey ought to assist the municipal officials to solve many of their own problems by taking up a more scientific line of approach than municipal officials always tend to adopt. The Merseyside survey makes criticisms of local authority policy (in housing, school building, town planning, for

instance) which would not have been necessary if the local authorities had approached their problem more scientifically. Thus the investigation must know what sort of questions the officials are asking (or ought to be asking).

Secondly, surveys of this kind should clearly be carried out in all towns, but not necessarily on as comprehensive a scale as in Merseyside or London. Many problems take almost exactly the same form in all parts of the country, and it would be a serious waste of resources to investigate them afresh in every case. The necessary standards of measurement in social enquiries have now been more or less satisfactorily worked out and it is important that comparability should be secured in future surveys. To set future enquiries on the right lines in these respects it is essential that there should be some kind of organisation of surveys.

Lastly, it is obvious that though a Survey at a single point of time—a "snapshot"—is of the greatest value, a continuous survey—a more cinematic record—would be even more useful. It is as important to measure the rate of change as to analyse a single position. It is very much to be hoped, therefore, that it will be found possible to keep some of the information in the Merseyside Survey up-to-date ; a series of reports on progress made would be of the greatest interest and value to the reader of the present volumes.

J.J.

The American Experiment. By M. J. Bonn. (Allen and Unwin, 7s. 6d.)

The sub-title of this book—" A Study of Bourgeois Civilisation "—gives a clearer impression of Professor Bonn's subject-matter than that which suggests a treatise upon the economic innovations exemplified by the actions of N.R.A. and A.A.A. The experiment is the experiment of American life. In fact, the theme is much extended beyond the boundaries of economics, and covers the range of American institutions and their environment. The study probes into each corner of American life—from the country and its ethnology to political institutions, the ideals and morality of the American people.

Occasionally, the work displays an uneasy coalescence between its dual features of impressionism and information, and this is especially so where use is made of the statistics provided by economists of the United States ; it is difficult not to be aware of

the obtrusion of paragraphs of statistics, which uninterpreted interrupt rather than support the course of discussion. Essentially the quality of the book is a result not of its information but of its conclusions, and those unsupported are by no means the least stimulating. It is hardly too much to say that the reader will feel less interest in the American people than in what Professor Bonn has to say about them.

Largely, however, reliance is placed upon impressions which provide a vivid commentary upon thoughts and conditions in the United States. Perhaps, it is natural that the economist should be most interested in the chapters outside his special interests, and though the question of the appropriateness of his views can only be answered by those with an understanding of American life, stimulation and entertainment are open to everyone. Even if one makes the reservation that Professor Bonn's writing awakens more confidence on non-economic matters, one cannot withhold admiration for the facility with which so boundless and so treacherous a subject is approached, nor cease to be grateful for one interpretation, and a brilliant one, of the many mysteries of America so baffling to uninstructed Europe.

An essay on the social philosophy of a great and complex people almost inevitably is built up upon a framework of ready generalisation. The brilliance of the view is fundamentally dependent upon the boldness—or daring—of the generalisations. (" While in England competition may have arisen in the playing-fields of Eton and Harrow, its roots in the United States went much deeper, its nursery being Church and Chapel " pp. 164-5.) About these generalisations one must not quibble ; one must subordinate them to their result, and few will deny that the result is a justification of the treatment.

Where Professor Bonn breaks from the cover of his philosophy to attempt a commentary upon economic life one becomes aware of distrust, if not of disagreement. Three statements can be given in example. " The increasing output of completely manufactured goods is dependent upon exports " (p. 141). " Thus high wages have been the driving force in American industrial development. On the one hand they have enforced the adoption of technically perfect (*sic*) methods ; on the other hand, they have eliminated those businesses which were unable to adopt them " (p. 168). " It is far better—from the standpoint of production—that the consumer should spend his income in purchases which make an existing business remunerative, than that he should put his savings, by means

of bank deposits, at the disposal of producers who are anxious to expand their businesses " (p. 205).

Criticism of this kind is unimportant : it is in its sweep rather than in detail that the value of this work lies. Yet dogmatism—if not error—such as this does lead one to wonder what queries would be raised in the minds of readers interested most closely by other subjects.

J.S.

Agriculture and the Trade Cycle. By JOHN H. KIRK. (P. S. King. 272 pp. 12s.)

MR. KIRK'S book attempts to analyse the rôle agriculture plays in the trade cycle. " There is an inherent tendency for agriculture to overproduce. The periodic fluctuations in the output of agriculture " —Mr. Kirk finds there are three-year and also eight-year periods— " are capable of causing pronounced fluctuations in general trade. The principal links between the two are to be found in the behaviour of savings and in investment in agricultural countries." (Mr. Keynes can almost be heard prompting at this point.) " The connection between agriculture and trade is *via* the investment activities of the developing (and debtor) countries, whose credit and incentive to develop vary with their agricultural receipts." If Mr. Kirk is right, agriculture is certainly the villain of the piece and his book will be carefully read especially by those who have been known to doubt whether there are trade cycles at all or at least strictly periodic cycles.

But Mr. Kirk is not sure he is right. He agrees that some of his conclusions are " novel " but he sincerely hopes " they will not be taken too seriously." He disarms possible critics by adding that " until it becomes possible to test and elaborate them, my only excuse for publication is the unlikelihood of finding time for further work in the near future."

It is to be hoped that Mr. Kirk will be able to follow up and complete the interesting investigations on which he has started. His tentative conclusions depend at the moment on too many assumptions and incomplete statistical analysis to be wholly acceptable.

The book is divided into two parts. The first is a more or less straightforward account of the effect of trade cycles on agriculture with which most economists would no doubt agree. Mr. Kirk has

difficulty in defining "overproduction" to his satisfaction. The statement that "we may contrast with agriculture the happy situation of the United States Corporation, which in the autumn of 1932 had managed to work down production to 13 per cent. of capacity" seems somewhat paradoxical. Again while it is true that the elasticity of demand for agricultural commodities at wholesale and primary market prices is derivative of the elasticity at retail, an inference such as Mr. Kirk might wish to us to accept that because the demand for clothing is perhaps inelastic, the demand for raw cotton or wool is therefore relatively inelastic may be quite wrong. In this section of his book Mr. Kirk is apparently ignorant of a good deal of previous research work on the characteristics of the demand for agricultural commodities. This is true also when he considers the problems involved in the transfer of stocks of agricultural commodities from one season to another. He quotes Mr. Keynes as the only authority on the costs of transferring stocks and presents a new algebraical treatment of the problem himself. The truth is that both Mr. Ezekiel and Professor Black had published a realistic treatment of the same problem some years before Mr. Keynes.

The second part of his book which considers the responsibility of agriculture for trade cycles is more controversial. The short period cycle of three years is based on certain theoretical reasoning and is tested only by a frequency distribution of cycles in the United States crop production (1879—1920). No other evidence is given of its actual existence and of the 22 cycles Mr. Kirk finds in the forty-two years from 1879 and 1920, eleven cycles have a period more or less than three years. (Inspecting the basic data given, I must confess I cannot find as many as 22 cycles.) The same statistical difficulties apply to the later section of the book which attempts to prove there are eight year cycles and it is open to doubt whether even if Mr. Kirk had made use of the most rigorous form of periodogram analysis, there is sufficient statistical data to prove or disprove the existence of such cycles.

H.C.

The Treatment of Poverty in Cambridgeshire, 1597—1834. By E. M. Hampson. (Cambridge University Press, 1934. 15s.)

This is the third of the volumes in the series of Cambridge studies in economic history, of which Professor Clapham is general editor, and it is a worthy addition to the series. Before reading the text

a glance at the bibliography will convince an informed person that the work contained in the volume must be fundamental in character. The main sources are local MS. records, including the vestry books and papers of fifty-four Cambridgeshire parishes which Miss Hampson has personally investigated. What her researches have meant to her is, one imagines, exactly expressed in the passage which she quotes from Addison.

The aim of the volume is correctly indicated in the title, and Miss Hampson has excellently fulfilled the aim. While, perhaps, her historical survey of the treatment of poverty in Cambridgeshire between 1597 and 1834 will not involve any large modification of other and more general surveys of the subject, her survey is notable for its vividness. Her material consists of incontrovertible facts and she sets them forth in a context which enables the reader to feel that he is living in the social atmosphere of Cambridgeshire in the seventeenth and eighteenth centuries. The general picture she creates is one of the numerous local authorities of the county seeking to apply measures which were intended to limit the extent of poor relief in their respective areas. The outlines of this picture become clearer, of course, when, in the seventeenth century, the pressure of the Privy Council towards centralisation was withdrawn, and when the local authorities were left more to their own devices aided by the Law of Settlement. Of the effects of this law in Cambridgeshire Miss Hampson's researches go to support the views which have been usually expressed since the time of Adam Smith, and although she has been unable to discover any actual assessments under the wage clause of the Statute of Artificers, she has come so near as to be able to incline to the view that when the clause was invoked it was by employers and not by workpeople. Other interesting parts of Miss Hampson's valuable survey are those relating to the efforts which were made to set the poor to profitable work, to the emergence and development or deterioration of workhouses, to the system of pauper apprenticeship, and to the principle of supplementing wages from public funds. Generally, however, it would appear that Cambridgeshire was commendably free from the more lurid examples of experiments on these lines. Throughout the volume the activities of Wisbech in dealing with its problems repeatedly attract attention, the sections relating to this town being well worthy of consecutive reading.

Finally, although the volume is concerned with the period 1597—1834, in its suggestiveness it is almost topical. Are we, in

1934, quite sure that the problem of the treatment of poverty is so completely solved that we are entitled to read without sympathy of the efforts made by our predecessors at a time which had many similarities to the present?

G.W.D.

The Twilight of Parenthood. By ENID CHARLES. (Watts & Co. 7s. 6d.)

IT is difficult for an economist to estimate the strictly scientific value of a large part of this book. The task belongs rather to the biologist and the physiologist with perhaps some assistance from the psychologist. The sub-title of the book "A Biological Study of the Decline of Population Growth," indicates that the author approaches her subject as a biologist. If an economist might be permitted to express an opinion on the scientific contents of the book, the opinion would be favourable, with the qualification that the book as a whole would be more convincing if some of the deductions and judgments it contains did not seem to be tinged with perversity.

In its general aspect the book may be regarded as an off-set to the writings which support the view that a deliberate control of human births is at present a desirable policy. It would appear that Dr. Charles would not be averse to a policy of control under conditions she desires to see established—if such a policy were then necessary at all. These conditions are those of a planned "ecology" as contrasted with the present conditions of a *laissez-faire* "ecology."

For the time being, however, her chief concern is that in the countries of Western Europe—with the possible exception of Russia for which country she appears to have considerable admiration—and the United States, the present trend of the birth rate is such that, if it continues, their populations are destined to decrease even to the point of extinction. This is a startling proposition and the chapters in which Dr. Charles adduces the data and discusses the proposition are obviously of scientific interest. But startling though the proposition is, it is hardly less startling than Dr. Charles' view that the existing economic and social system is the general cause of the situation. Not so very long ago the system was made responsible for the increase of population; now it is made responsible for a threatened decrease of population; truly the wheel is well on the way towards completing the circle.

It seems evident quite early in the book that Dr. Charles has not much use for present day economists and their teaching, and certainly not for any economist who might suggest the possibility that the final verdict on *laissez-faire* as a principle which cannot profitably be ignored in economic and social organisation has not yet been given. One would gather that she is strong in her conviction that the views of economists on the economic aspects of the problem of population are still a simple repetition of certain views expressed by Malthus when he wrote his essay 140 years ago. This suggests the reflection that, although the objective results of the investigations of Dr. Charles in the sphere of biology might be accepted with the utmost confidence, it might be well to exercise some caution in accepting her guidance when she enters other spheres. But if the book irritates it also stimulates, and everyone with a serious interest in the general problem of population would be well advised to give it a place in his library.

G.W.D.

What Everybody Wants to Know about Money. Edited by G. H. D. Cole. (Gollancz. Pp. 544. 5s.)

This book has been planned and edited by Mr. Cole who has himself written four of its chapters. The remainder have been contributed by nine Oxford Economists; but notwithstanding the number of contributors, one observes a surprising continuity.

The purpose of the book is to present a branch of economic study in such a manner that it will be easily understood by the intelligent layman. It succeeds admirably in its purpose so long as the authors are content to explain the subject, but one doubts both the efficacy and value of many of the numerous improvements that are suggested.

A chapter by Mr. Gaitskell entitled "Four Monetary Heretics," gives an excellent account of four of the more revolutionary monetary theories. It also tends to give, what is perhaps an erroneous impression, that the authors of the book are moderate in their outlook.

The first two essays, "What is money?" and "Money and the World Crisis," again show Mr. Cole to be a master in the writing of simplified economics, but while this enables the layman to understand the descriptive side of economics there are dangers where theory is involved. It is possible to look through the eyes of a Martian and prove the utter futility of economic nationalism, but a world which persists in increasing restrictions on international

trade will need to be convinced by more subtle arguments. If the solution of the world's economic problems is as simple as Mr. Cole would have us believe, statesmen, economists, and financiers must suffer from a remarkable lack of intelligence, unless they pursue their present actions from ulterior motives. This is not to commend the obscuring of the apparent by technical language, but to suggest that while human nature makes the problems of the world of such complexity they cannot be solved by recourse to the ideal.

While economics can make little progress as a science unless it assumes that Man is always actuated by a desire for gain, one must not forget that it is merely an hypothesis. To the extent that Man puts religion, patriotism or any other source of economic friction before this desire for gain, the validity of results achieved by the use of this hypothesis will be open to question.

N.R.H.

The British Isles. By L. Dudley Stamp and S. H. Beaver. (Longmans, Green. Pp. 719. 25s.)

The relationship between the studies of the geographer and of the economist must always be intimate. The latter is concerned with how resources are used; the former with the natural resources available, their connections with each other and with man himself. Lifted, as it were, out of economic science, the geographer presents a picture of those means that nature has provided. As such this study of the British Isles has peculiar interest to the student of economics, for it gives him a most complete account of what must remain the important basis of our welfare.

Broadly the volume falls into two sections; the first a pure geographical and geological description of our countries—a description of the "land" untarnished by human activities. And this part is valuably supported by a chapter on "The Peopling of the British Isles"—an indication of the use of our labour. The second part constitutes an economic geography proper, relating this raw material of wealth to the human activities which exploit it. The industries most dependent upon natural factors, whether on account of raw material supply, or of the disposition of natural lines of communication, are dealt with in some detail. It will be well understood that this method covers still the greater part of our activities, though a part tending to diminish. Of the seven industries surveyed, it is worthy of note that four are agriculture, coal, iron and

steel, and the textile industries—the old staple industries which founded our economic and financial pre-eminence. It is not to be thought that this should prompt a further reflection that geographical study is losing its economic importance. The reflection should surely be that despite the obstacles to international trade, it is world resources rather than national that shape the economic organisation of a community. Though, as the authors suggest, the influence of technical as well as commercial changes must be considered; we are to some extent overcoming the necessity for intense localisation.

At the present, however, it is our own resources that are looming ever more important. No better description of them in a form so convenient could be given. This is a travel book for the economist, for the business man, or indeed anyone interested in wealth getting. It describes for us the economic aspects of the different regions so that we may judge for ourselves upon the present economic problems of industrial change. Here we have the real statics of the subject; it is the economist's job to see its adaptation to the dynamics of want.

In such a work as this it is mere justice to draw attention to the excellence of the production. Description is most interestingly and informatively supplemented by pictorial and diagrammatic aids; while there is sufficient statistical material given to indicate the quantitative use made of our various resources. Together these enhance the book's value, already great, to the student of economic geography.

J.S.

La Concezione Biologica dell'Economia. By FRANCESCO VITO. (Milan; Societa Editrice "Vita e Pensiero." 1934. Pp. ix+70.)

SIGNOR Vito is concerned at the tendency, especially prevalent among Italian writers, to regard economics as a science divorced from reality, since the validity of its laws consists in their correspondence to the premises instead of to actual phenomena (Pantaleoni) and these laws have no objective existence (Pareto). But it is impossible wholly to ignore the attitude of individuals in economic action, and since human actions cannot be explained as the resultants of mechanical forces, some form of biological analysis is indispensible. He has written, therefore, a critical account of Marshall's theories, considering first the problem of time in economics; the deficiencies of the Marshallian construction and the possibility of explaining them in the light of biological analogy; the fertility of schemes of partial

equilibrium in the consideration of time, and the application of this to monetary trade. He contrasts Marshall's conception of the object, aim, and method of economic science with that of Pareto and Pantaleoni; he examines the evolutionary theory, pointing out that Marshall, unlike Pareto, has no intention of accepting what the latter calls "social darwinism," nor like Veblen an evolutionary law which guides humanity towards a greater production of material wealth. He examines the device of the representative firm as an application of biological analysis. He concludes that the use of biological analogy is legitimate in economics provided one is conscious of the limits within which its results are contained.

B.B.

Poverty and Housing Conditions in a Manchester Ward. By JOHN INMAN. (University of Manchester Economics Research Section Pamphlet, No. 2. 1s.)

THIS pamphlet is a compact, well-written, and very readable survey of the social conditions in which 25,000 people, nearly all working class, live in Miles Platting. Mr. Inman paid visits to some 200 households, inquiring into their incomes, accommodation, and occupations and the completeness and consistency of his results are the highest tributes to his care and tact.

The investigation puts under the spotlight an area which is typical of the poorer working class districts not only in Manchester but in many industrial cities. The houses, for the most part, are structurally unsatisfactory. The streets are mean and narrow. Factories and dwellings are so close together that smoke and grime and noise are a constant offence. "The district is one which in few, if any, respects reaches standards acceptable to-day." It must be remembered that Mr. Inman is writing not of a few isolated slum streets but of a whole district itself the size of many complete towns.

Each line of inquiry suggests to the reader acquainted with modern developments a remedy within the power of a national or local authority. The inadequacy by modern standards of a very large proportion of the houses, together with the total absence of planning in the lay-out of the area, shows that clearance and re-building programmes must be thought about in terms of the complete re-planning of whole districts. The discussion of over-crowding, and of its relation to poverty, shows that most of the families could not afford even the subsidised rent of a Corporation

house. Such families are not all slum dwellers and may not be helped by the 1930 Slum Clearance Act. There is clearly a very strong case for some system of differential rents on housing estates. The study of incomes shows that nearly all the families on Public Assistance are unable to meet the cost of their necessary bodily requirements and are in serious danger of malnutrition. The Public Assistance scale should, therefore, be related to some rational estimate of needs. It is not rational, for instance, that the allowance should, as in Manchester, fall from 3s. (itself quite inadequate) to 2s. per child after the fourth child.

The value of surveys of this kind as guides to policy is not open to doubt. All that remains is that once a survey has been completed some positive action should be taken by those authorities upon whom responsibility rests.

C.T.S.

Planned Money. By Sir BASIL BLACKETT. (Constable. Pp. 194. 5s.)

As the author claims in his Preface this is an attempt to present an alternative constructive programme for the revision of our national currency. Sir Basil Blackett is well qualified for his task, being a Director of the Bank of England and a former Chancellor of the Exchequer of India.

Sir Basil maintains that he is a believer in the Planned State, but claims that all national planning must be co-ordinated. He deals with the monetary side of this planning in his book and calls upon this country to adopt such a forward policy as will induce other countries to follow our lead. He believes that monetary policy should aim at the stabilisation of prices. Even this limited objective might be of great value so far as internal trade was concerned, but it can only be bought at the price of a fluctuating exchange rate. The author admits this, but claims that the worst features of a fluctuating exchange would be avoided by other countries attaching their currencies to sterling and constituting what he calls "Sterlingaria"—presumably they would bear the burden of fluctuating prices. The idea is that those countries which do an extensive trade with this country would be quite willing and able so to manage their currencies that values in terms of sterling remained constant. Over the past few years this has to some extent happened. This may be regarded as proof of the feasibility of the scheme over a short period, but it can similarly be claimed, in

view of the number of years the gold standard operated, that this system was equally possible. A point that Sir Basil seems to miss is that given the conditions necessary for the working of "Sterlingaria," there should be little difficulty in the operation of the Gold Standard. A point in favour of his proposals, is that the smaller the area the greater is the likelihood of obtaining these conditions. It is quite true that minor fluctuations in the exchange rates can be ironed out by the operation of machinery similar to that at the disposal of our Exchange Equalisation Fund, but no such fund could maintain constant rates over a reasonably long period of time in the absence of favourable conditions. Sir Basil admits that occasionally there will have to be adjustments of the rates. Unless conditions are favourable this may have to be done more frequently than the author anticipates. Even on the Gold Standard this could be done by the "compensated" pound sterling. The advantage of the scheme is that it avoids the dangers following long term alterations in the value of gold.

Whatever the merits or disadvantages of the author's suggestions, it appears that the policy advocated is the policy that is being pursued by the Government—notwithstanding the lip service paid by the assembled governments at Ottawa to a policy for the raising of prices.

N.R.H.